

American Fabrics



Number Fifteen Fall 1950

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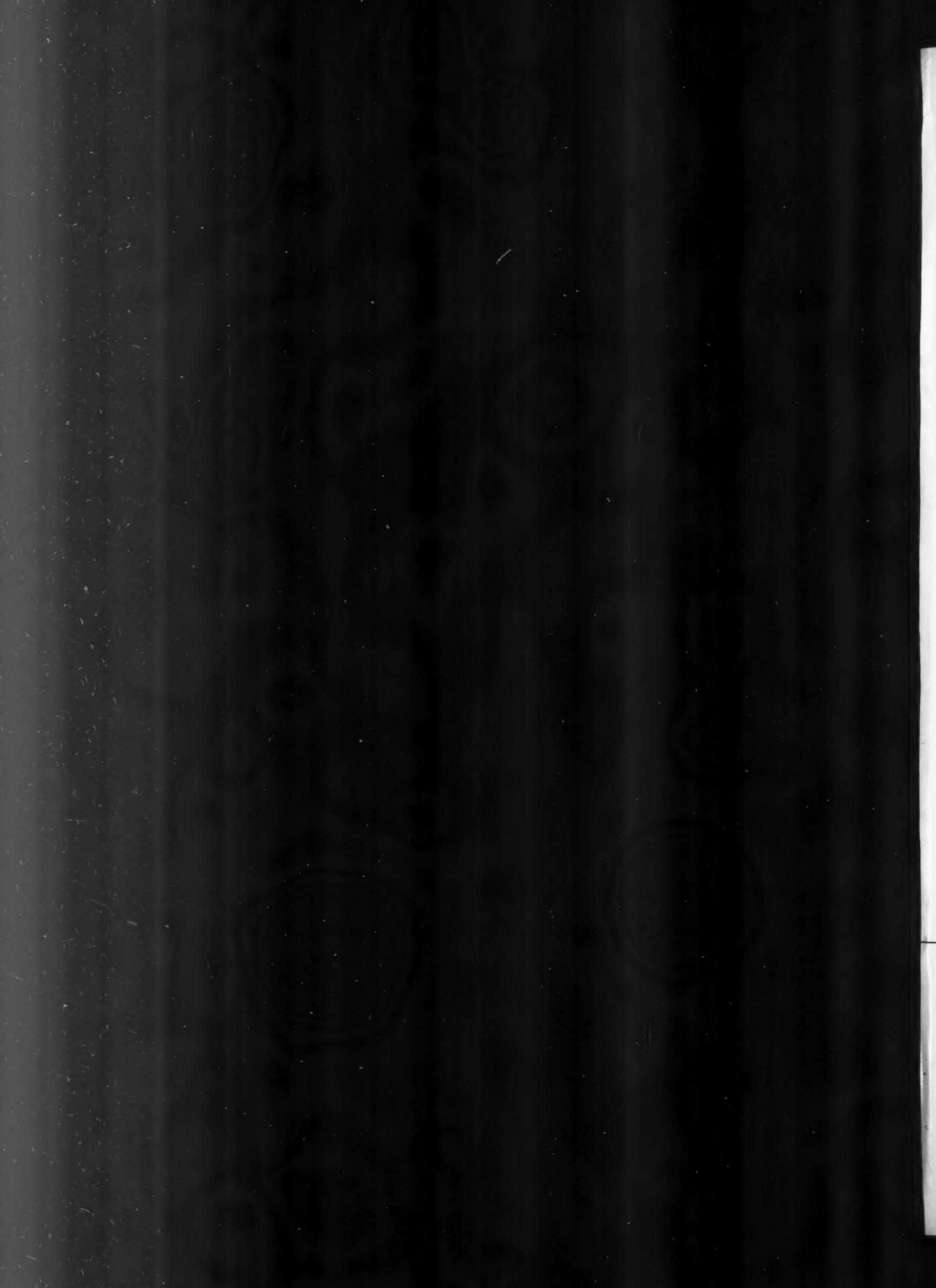
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Number 15

Autumn 1950



American Fabrics

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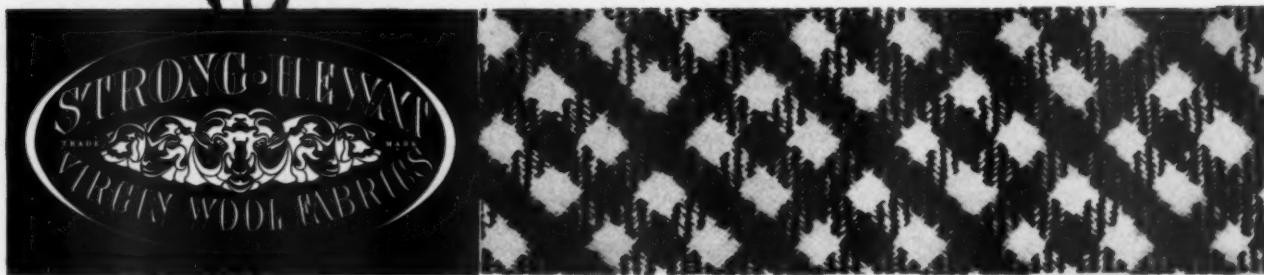
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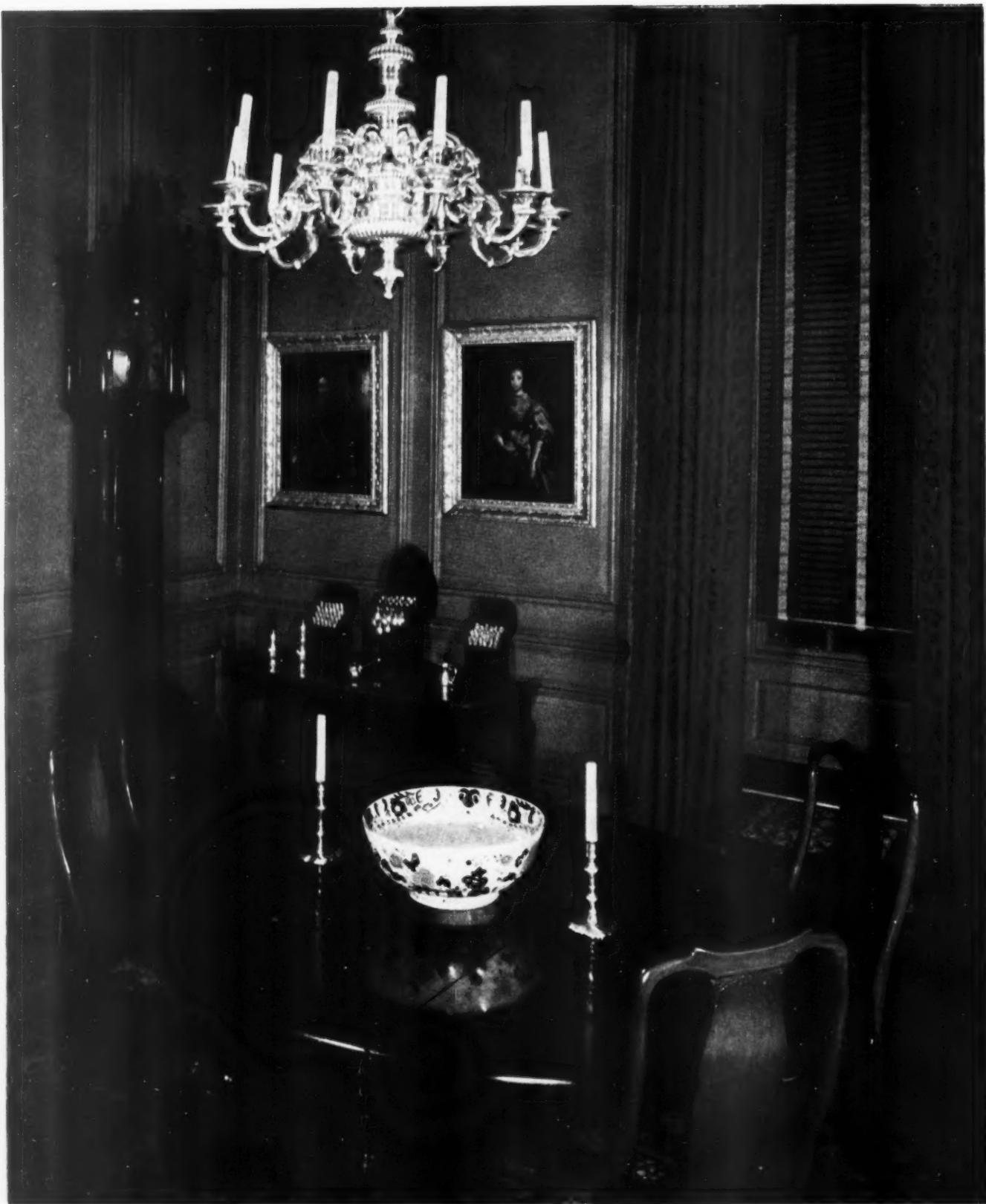


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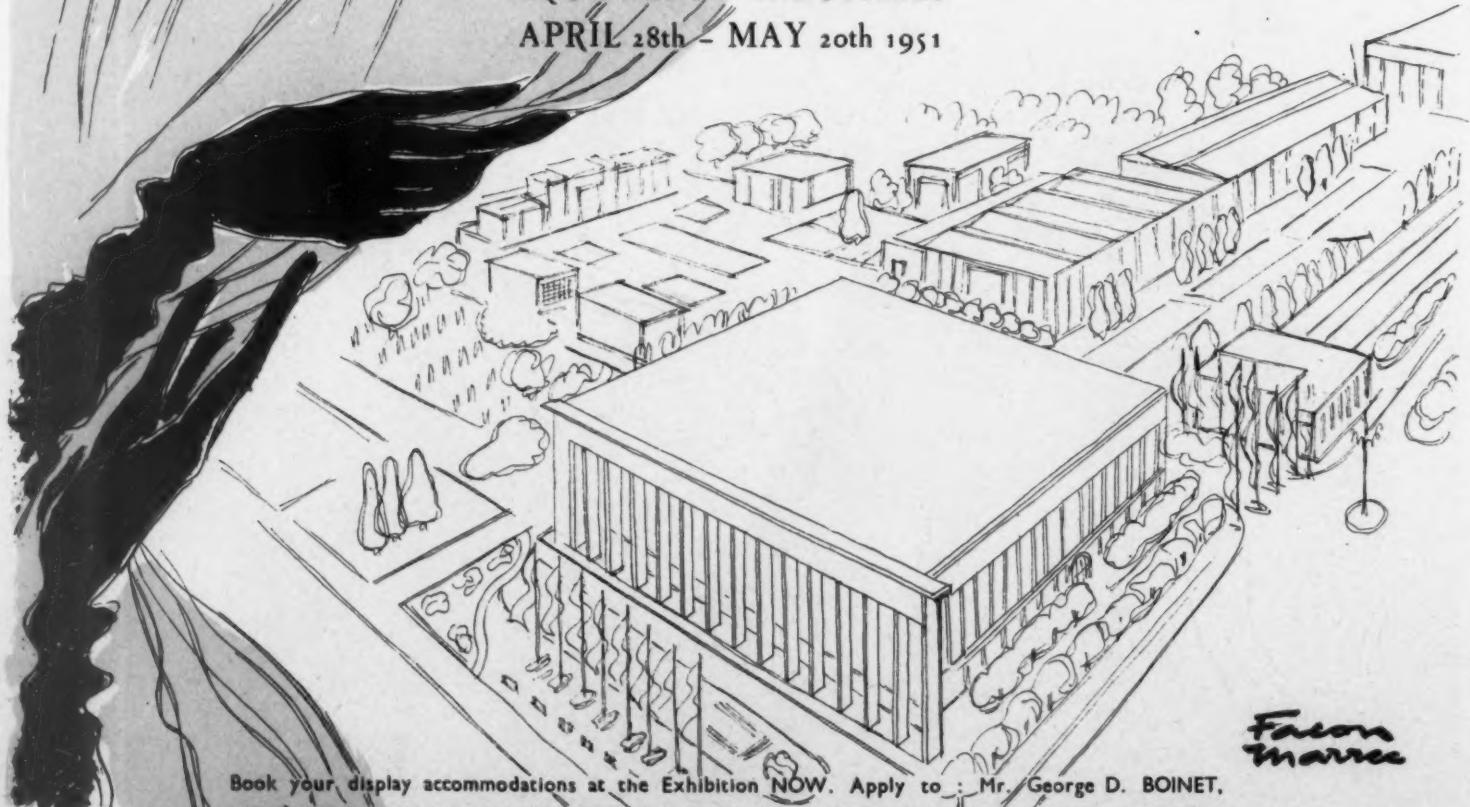
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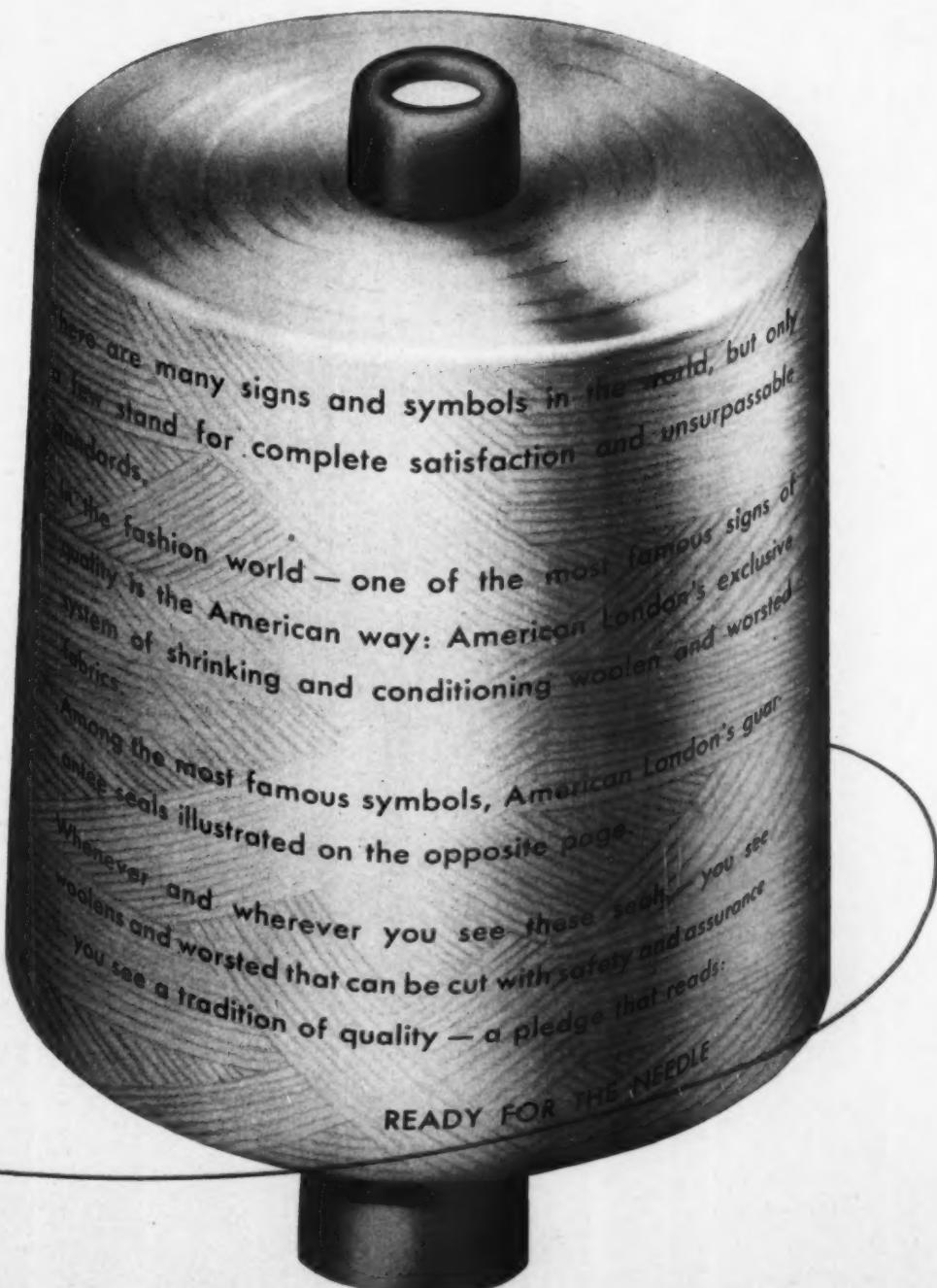


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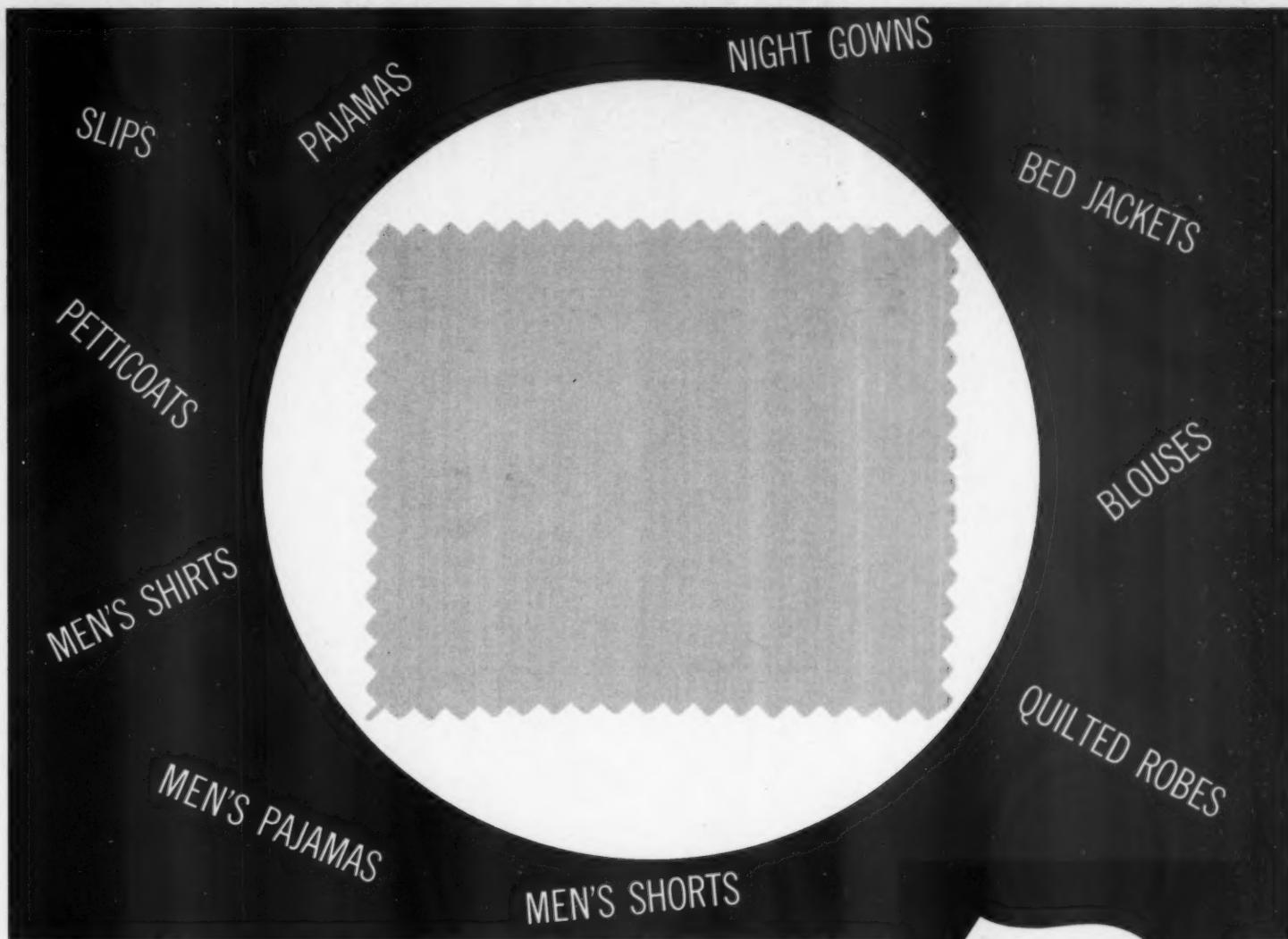
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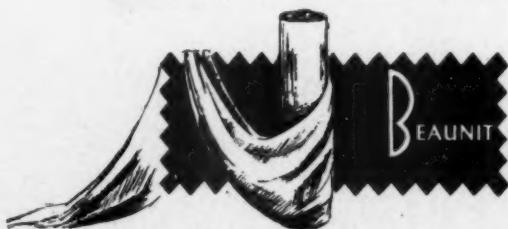


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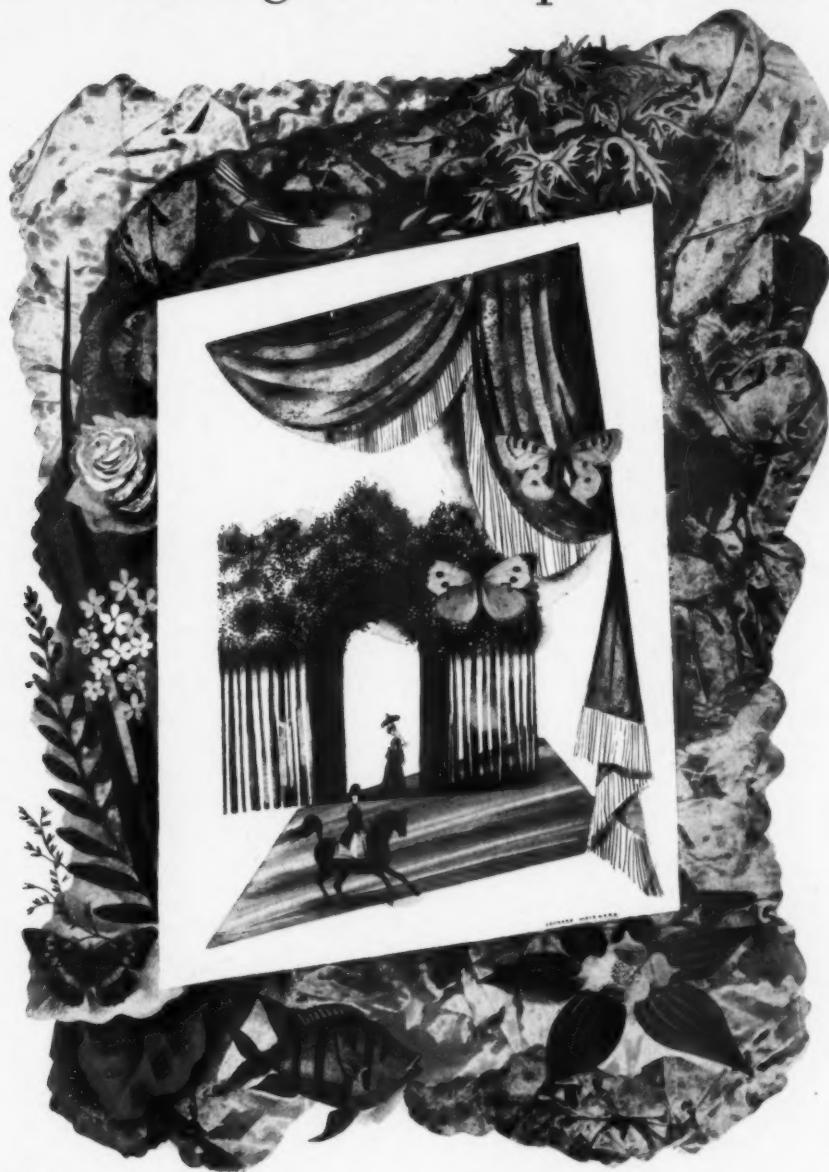
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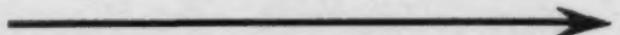
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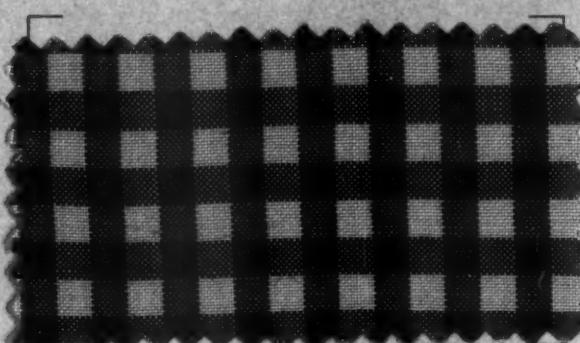
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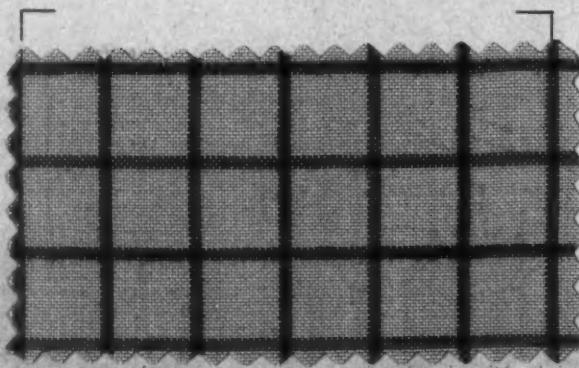
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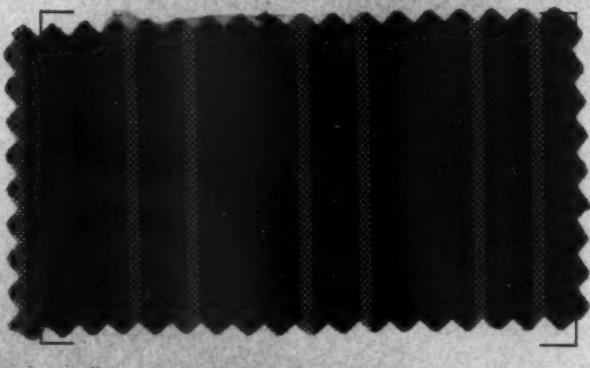
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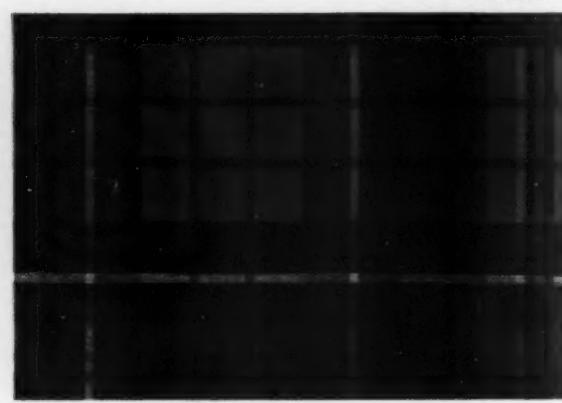
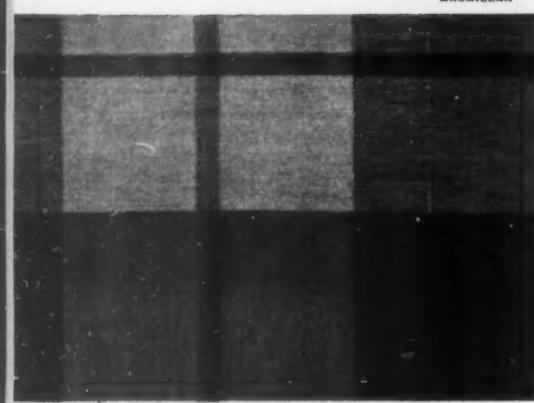
•
Manufacturers of Thrown Silk

MILLS

Littlestown Throwing Co.
Littlestown, Pa.

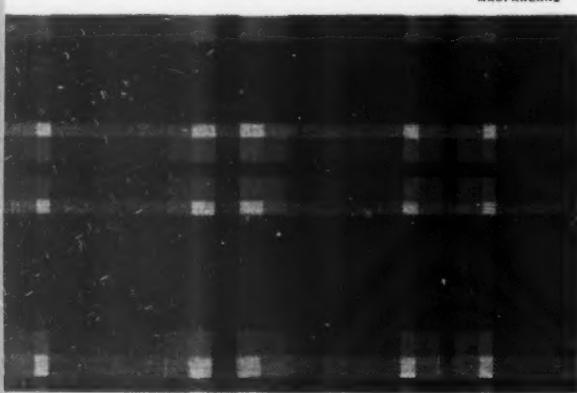
Lackawanna Textile Co.
Taylor, Pa.

Now the News in



Freshest idea in Tartans! 15 authentic patterns in fashion-favored zephyr weight! Sure SPORTSHIRT favorites!

DAN RIVER Zephyr



And they wear so much better . . . Perfect for BOYS' WEAR! And so much easier to care for, thanks to Wrinkl-Shed's . . .

*WRINKL-SHED'S PERMANENT FEATURES: • Actually sheds wrinkles • Needs no starch ever • Permanent shrinkage control

With the Famous

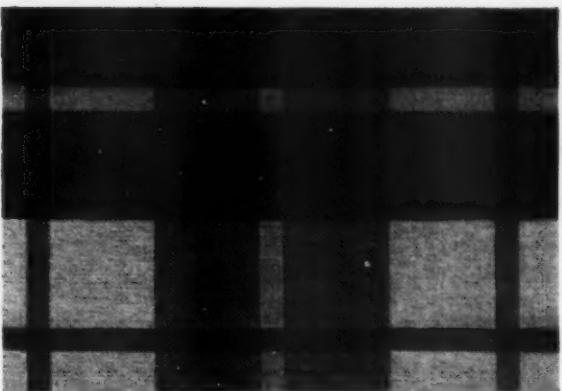
Dan River Mills Inc., Danville, Va. Makers of Dress Fabrics • Wrinkl-Shed® Cottons

Authentic Tartans

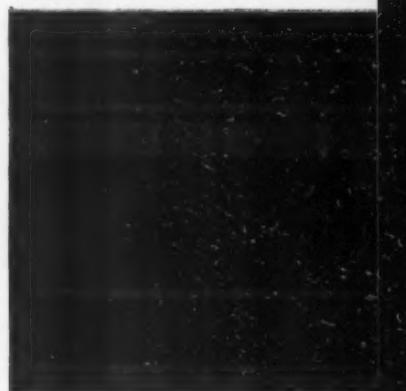
MACLACHLAN



MACRAE



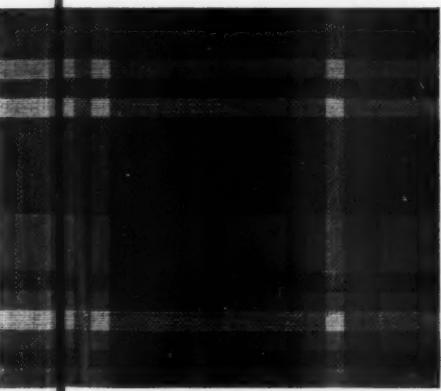
MACDONALD



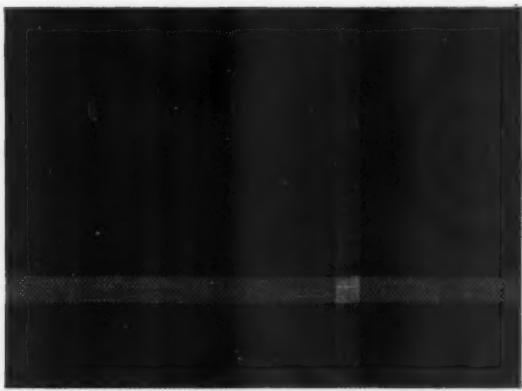
With the Wrinkl-Shed® finish! Highly-promotable, nationally advertised by Dan River! Cool, correct for PAJAMAS!

Weight Cottons

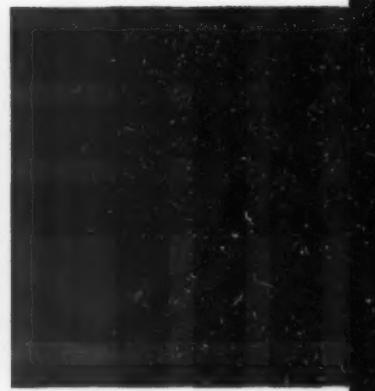
DRESS STEWART



CAMPBELL OF ARGYLE



FRAZER



Wonderful, practical features! Ideal for lightweight ROBES! Yes, these cottons will add new profits to your promotions!

- control
• Stays clean longer • Easier to wash • Halts perspiration odor • Dries faster • Irons easier • Resists mildew

Wrinkl-Shed® Finish!

Cottons Stormwear Fabrics • Shirtings • Rayon Suitings • Yard Goods • Yarns • Sheets and Pillow Cases

JACQUES FATH, celebrated couturier, selects **WYNER JERSEY** as the ideal medium for his dramatic talent . . . adding still another great name to the distinguished list of famous designers who use **SAG-NO-MOR** to create some of the world's finest clothes

as seen in SEPTEMBER 15th VOGUE



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Carson, Pirie Scott
I. Magnin
Julius Garfinkel
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JACQUES FATH

designs for Joseph Halpert
a heart-quenching fashion in the
great couturier tradition of which he is master.
For fluid motion that is pure drama he chooses,
of course, "JERSEY AT ITS BEST"

SAG-NO-MOR®
worsted-wool **JERSEY**

by *Wyner*

also by the yard at fine stores everywhere
I. A. WYNER AND CO., INC., 1441 Broadway, New York 18

Gerli & Co., Inc.

119 WEST 40TH STREET
NEW YORK 18, N. Y.

**raw
silk
dealers
and
importers**

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CABLE ADDRESS:
GERLI, NEW YORK

FABRICS
Riegel
FOR EYE APPEAL
AND BUY APPEAL

Our golfers may be "hot under the collar"
but their shirts should keep them cool. They are breeze-inviting,
sales-inviting sport shirtings from Riegel's Spring and Summer line.

Colorfast and Sanforized . . . in soft hues and novel patterns . . .
now being shown by leading cutters everywhere.

Riegel TEXTILE CORP. • COTTON AND RAYONS • 342 Madison Avenue, New York 17, N. Y. • ATLANTA, BOSTON, CHICAGO, COLUMBUS, LOS ANGELES, ST. LOUIS

LORRAINE® WORSTEDS



Suit by Rothmoor



LORRAINE WORSTED SHEEN

A fabric that makes fashion its province: soft-textured, pure worsted sheen. Lorraine's fabulous gabardine that has magnificent animation and remarkable "spring". So be sure of quality, be sure of value — be sure to ask for Fashions of Lorraine Worsted... at leading stores.

LORRAINE MANUFACTURING COMPANY
INC.
261 FIFTH AVE., NEW YORK 16, N.Y.

as appearing in the October 1st, VOGUE

*The
Silk Lace Industry
of America
salutes*

**THE
WORLD
OF
SILK**

*... on the occasion of the
INTERNATIONAL SILK CONGRESS*





Holland sends a warm friend for life!

Here at last is a blanket that makes every eyer a buyer. Rich and fleecy, velvety soft, exceedingly strong - yet feathery on the body - its luxurious warmth cuddles one up in the soundest slumbering.

Ask for Van Wijk's double-face "Holland Health Blanket", feel its 100% woolly texture, feast your eyes on the superb pastel shades that come in a variety to match any bedroom color-scheme.

No wonder Van Wijk's "Holland Health Blanket" is tops for whom only the best will do!

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HOLLAND HEALTH BLANKET



BAXTER "LIMITED EDITION" WOOLENS



SQUARE RIGGER
Created by BAXTER
for Cape Ann Manufacturing Co.



TATTERSAL
Created by BAXTER
for Fox-Knapp



QUAL-LAN-NY
Created by BAXTER
for Portland Sportswear
a First in Nylon and
Wool for Outerwear

5 best sellers . . .

edited by 5 star manufacturers. Custom-milled for the specific requirements of a limited number of the nation's top manufacturers, these Limited Edition fabric successes are available in patterns created for (and sometimes by) quality manufacturers.



MacGREGOR
Created by BAXTER
for MacGREGOR
(David D. Doniger Co.)



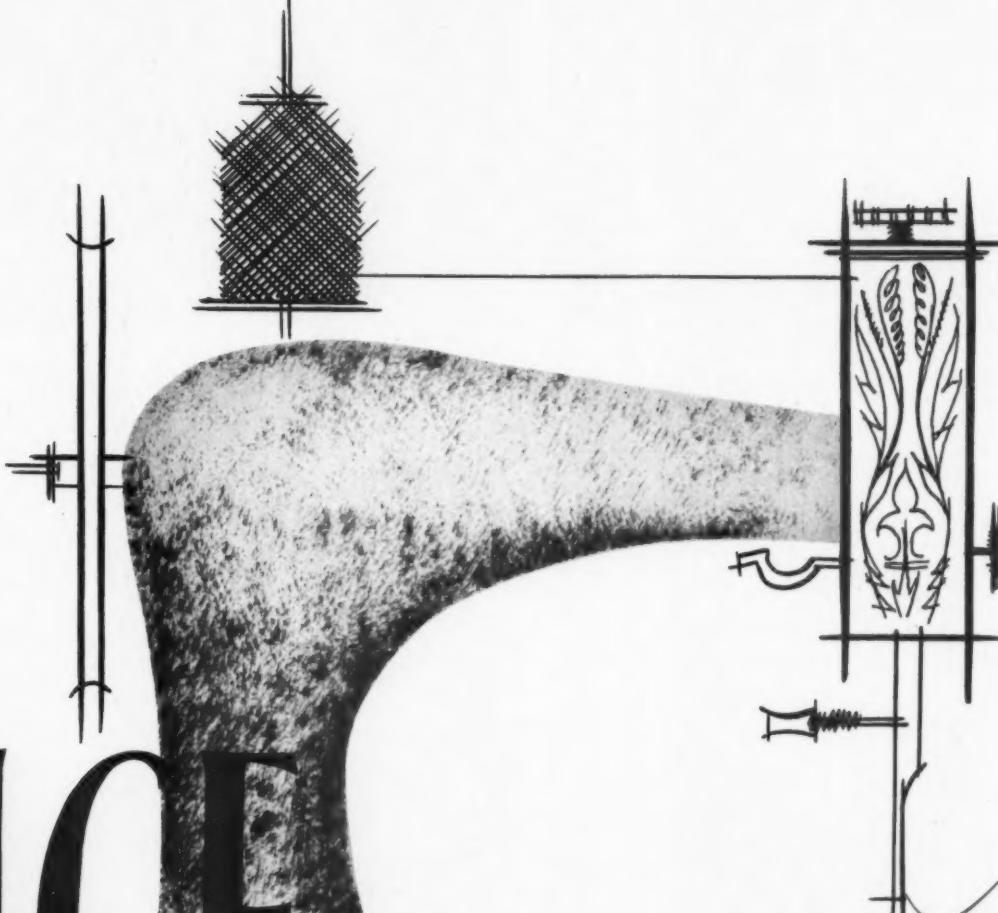
*help
write
a
new
chapter
for
american
fashion*



DUFFER FABRIC
Created by Baxter
for Duffer Company

BAXTER WOOLEN CO., INC. Somersworth, New Hampshire

Sales Agent: BAXTER WOOLEN SALES CO., Empire State Bldg., New York 1, N.Y.



RICE

RICE'S QUALITY SILK THREADS are in
ever-growing demand by the country's leading
manufacturers . . . many of whom have
been using Rice superior sewing silk
since 1878 to produce better products.



A. H. RICE COMPANY * MILLS - PITTSFIELD, MASS. SALESROOMS: NEW YORK * BALTIMORE * PHILADELPHIA * ROCHESTER * CINCINNATI * ST. LOUIS * CHICAGO * LOS ANGELES * PORTLAND, OREGON

KANMAK THOROUGHBRED *worsteds*



KANMAK
100% VIRGIN WOOL

This label identifies Kanmak-controlled quality

Amoskeag-Lawrencee Mills, Inc.
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Lymansville Company
Kanmak Mills, Inc.
Macon Mills, Inc.

KANMAK TEXTILES, Inc., Women's Wear Division, 417 Fifth Avenue, New York 16, New York

new arrival...

KaMaRepp

*distinguished all-virgin
wool worsted for Spring*

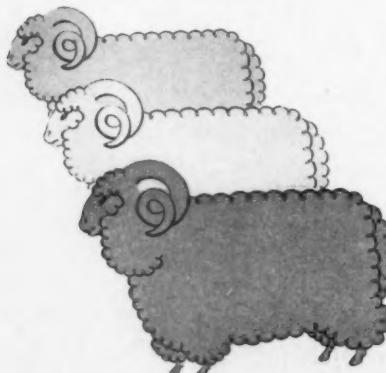
KaMaRepp... woven of fine foreign wools
... with beauty of color, and a texture
interest that is top Fashion news!

KaMaRepp... silky-surfaced, adaptable
to softer lines, the finer detailing to be
featured in Spring suits and coats.

*Instant eye-appeal plus enduring quality
... achieved by Kanmak's vast manufac-
turing resources, complete control of all
processes.*

*Come in... or telephone for a representa-
tive to call: MURRAY Hill 9-2100.*

*From the sheared wool... to the finished
yardage... every manufacturing process —
scouring, carding, combing, drawing,
spinning, weaving, dyeing—is under
rigid Kanmak quality controls.*



never before seen



3 history-making blended fabrics



Robbins is making history with 3 new fabrics that prove we keep our eyes where they belong... ahead! They're masterly developments in rayon blends—so dramatic in their possibilities we've called them **forerunner fabrics**. And because they offer your customer new blends with new wearability—**forerunner fabrics practically sell themselves!**

1 a skillful blending of acetate and viscose: our own strand-for-strand duplicate of top-flight worsteds.

It's a long-wanted weave priced where your market can reach it.

2 acetate rayon blended with nylon: here Robbins achieves an alpaca weave outstanding for its greater strength, stability, beauty. Point to remember: fabric 2 runs far more smoothly than any alpaca weave to date!

3 a blend of acetate rayon and nylon in a sandy sheer for dresses that's completely washable—that looks even fresher after its bath than before! Fabric 3 dries quickly, won't stretch, and keeps its shape permanently.

See the 3 newest Robbins fabrics today—they're eye-openers!

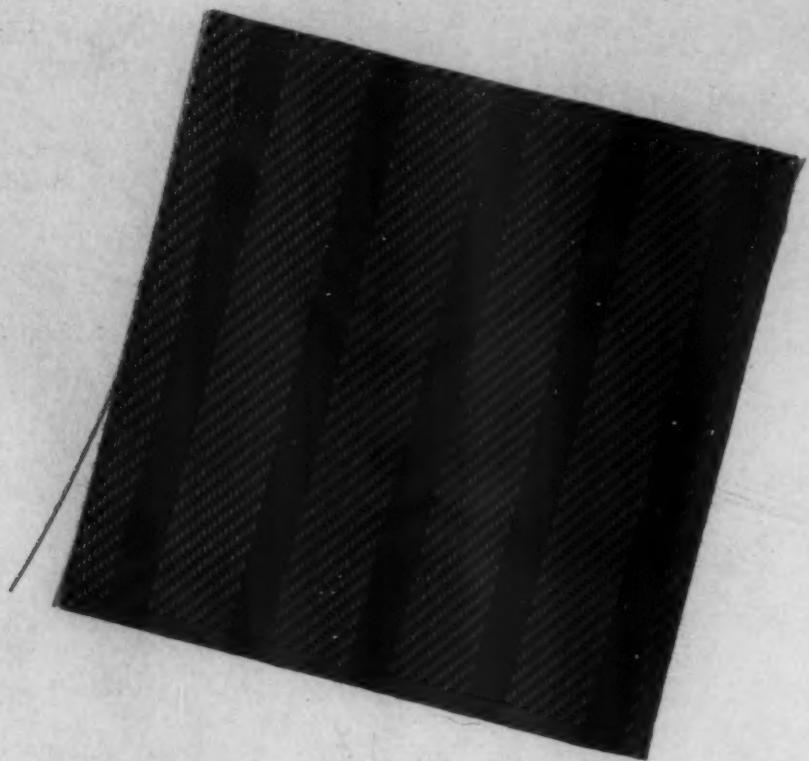
a
ROBBINS
fabric

ROBBINS MILLS INC., 498 Seventh Avenue, New York 18, N.Y.

1

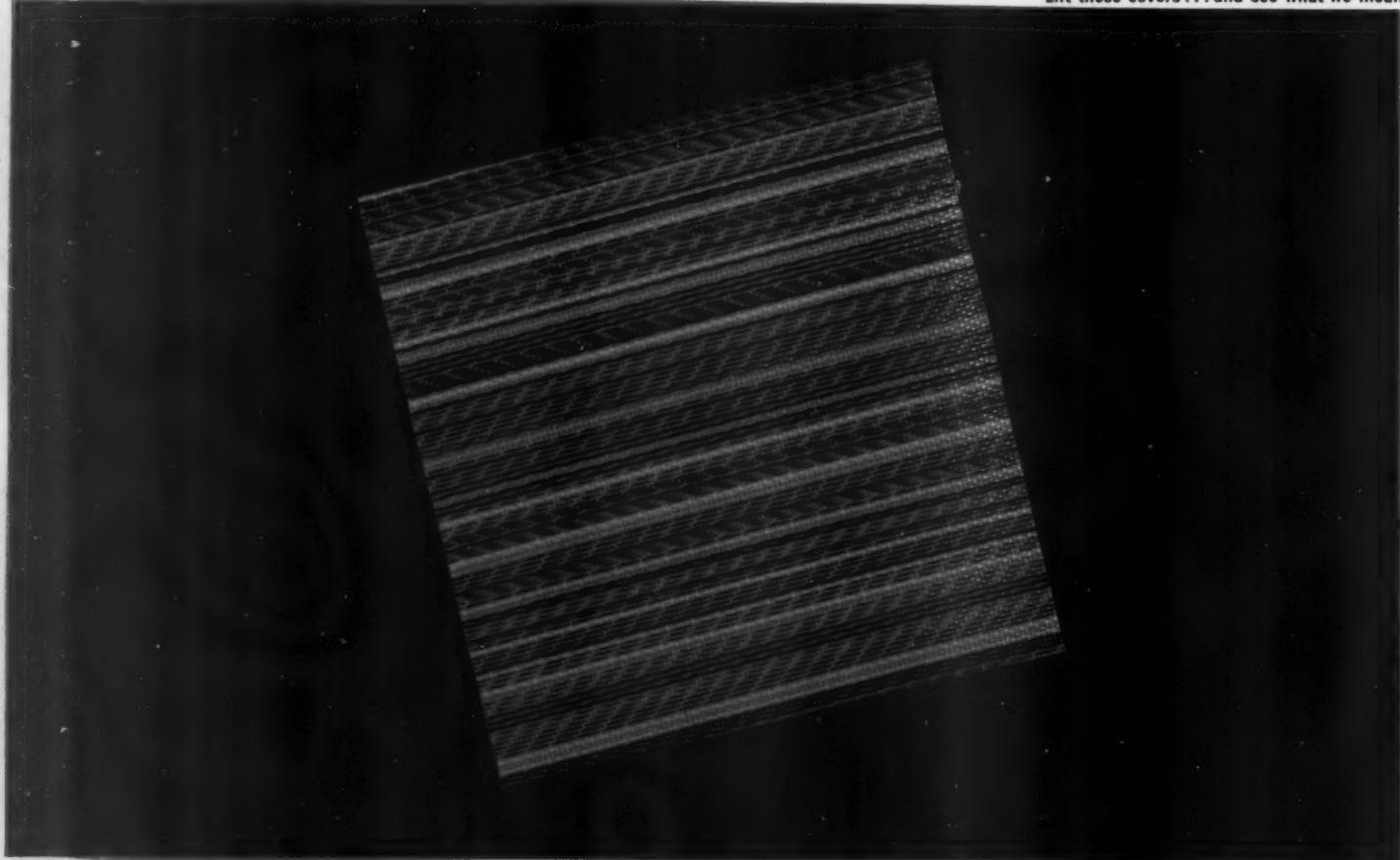
2

3



It's the fabric that covers the greatest designs!

Lift these covers...and see what we mean





on the agenda for spring

Spring is selling time. That's why you've a date to see LANKENAU'S rayon plaids first.

Capitalize on the Spring demand for these newsmakers in the fashion field.

Our year 'round gabardines, smart pin checks, novelty weave sheens and durable top coatings belong on your agenda, too.

LANKENAU FABRICS wear well . . . keep a crisp seam. They feature all the newer, smarter trends for those who like quality at a practical price. Our new line for Spring is designed to bring manufacturers and retailers a flourishing crop of new customers.

"You're right so right (for sales) in rayon —
luxurious acetate rayon"

Lankenau
CO., INC.
1450 BROADWAY, N. Y. 18, N. Y.





THE WORLD OF SILK AWAITS YOU

- FINE TEXTURES
- EXQUISITE DESIGNS
- ELEGANT COLORINGS

BY AMERICA'S FOREMOST STYLIST



H. J. STOTTER, Inc., 1441 Broadway, New York 19, (Longacre 4-4311)

OFFICES - PARIS, ZURICH



CABLE: "STOTTERSKY"

The Stafford Stallion



It is only natural that the Stafford mark should identify the finest in silks. Only natural because nowhere else in the weaving, dyeing and finishing of finer fabrics do you find such complete integration, such progressive engineering, such triumphant mastery of color and design.

With special reference to silk, it is worth noting that Stafford silks are completely produced by Stafford...from the time the raw yarn enters the plant to when the glorious fabrics are delivered. Stafford control is evident in the depth of color of the yarn-dyed loveliness, in the brilliance and clarity of Stafford printed silks.

Some suggestion of the scope of Stafford operations is indicated by the special function of the huge Stafford plants.

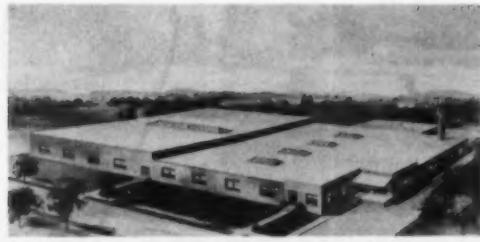
Some idea of the great assistance that Stafford consistently renders to users of finer fabrics, can be obtained from a visit to Stafford House. Stafford House is much more than a showroom of fabrics. It is definitely a fountainhead of ideas.

So if you chance to be in the vicinity of Stafford House, you are cordially invited to call at 3 East 40th Street, New York, New York.

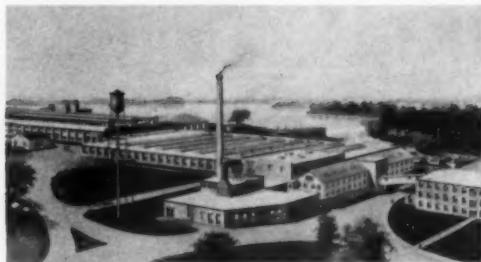


Stafford at Scranton, Pa. The home of Stafford yarn-dyed fabrics in both silk and rayon. This huge plant has been recently re-tooled with an eye to making fabrics of an even more unusual texture...texture worthy of the superb designs which have made the Stafford mark world-famous.

...the
symbol
of fine
silk
fabrics!



The Stafford plant at Taylor, Pa. It is here that the fine yarns are twisted and thrown, and then converted into Stafford's gray goods—wonderful backgrounds for Stafford's unique printing, dyeing and finishing. Perhaps nowhere in the world is such attention devoted to the quality standards of gray goods. Rigid inspection assures that every bolt is worthy of the distinctive stamp of a Stafford print.

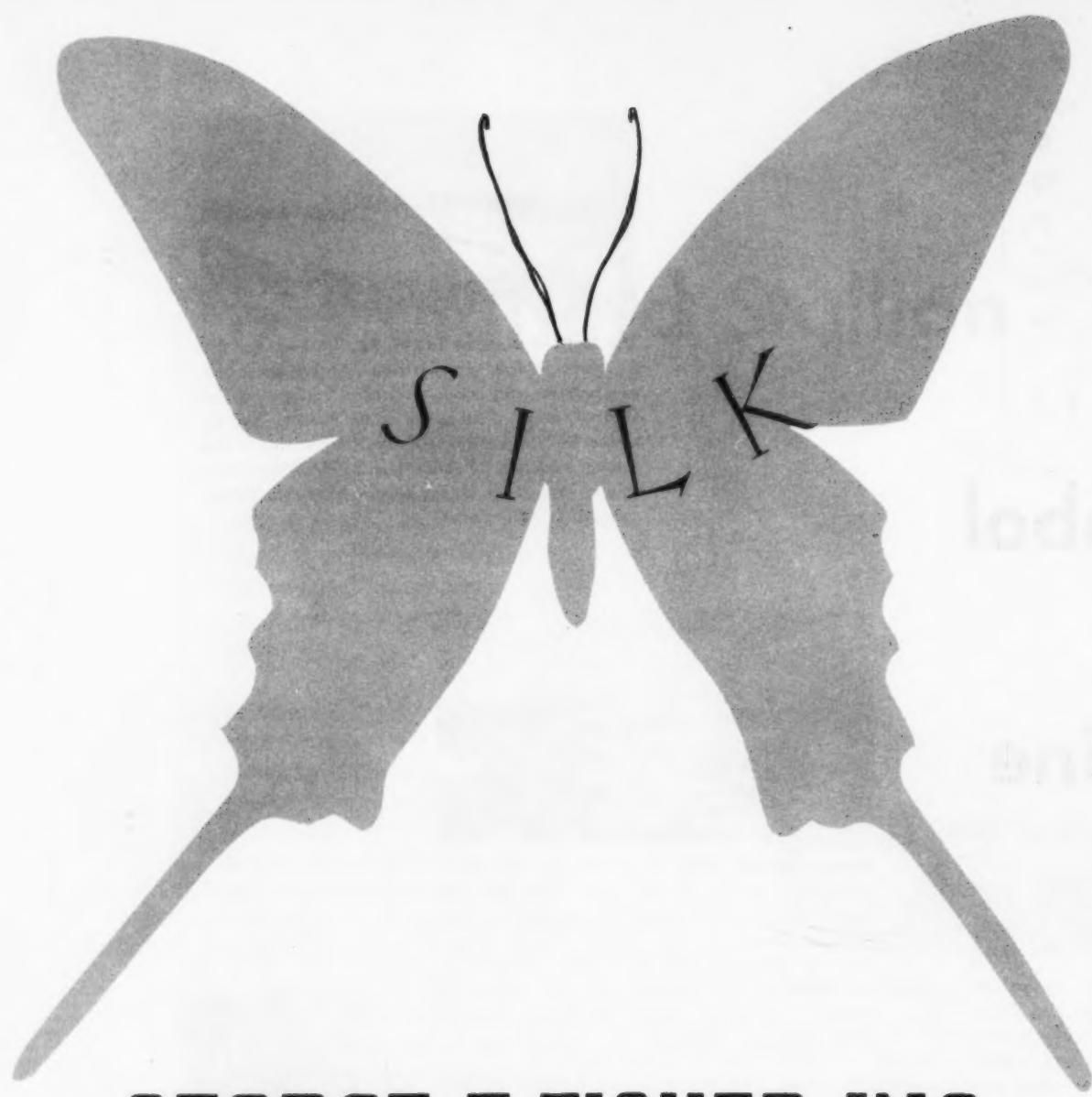


Stafford Springs, Conn. Deep in the heart of a gentle Connecticut valley lies the plant wherefrom all Stafford printing, dyeing and finishing comes. Here are produced the truly beautiful and extraordinary designs that have become the hallmark of Stafford fabrics. Here each shimmering bolt of fabric gets the imprint of a pattern unrivaled in the fabric world for clarity of color, brilliance of design.

Stafford House...
headquarters of the
Stafford Family which
includes Goodman &
Theise, Inc. and its
offspring Staffordwear,
Inc., Stafford
International Corporation,
and Stafford Printers.



Goodman & Theise, Inc., Stafford House, 3 East 40th St., N. Y. 16, N. Y.



GEORGE F. FISHER, INC.

95 MADISON AVENUE NEW YORK 16, N.Y.

MEMBERS AMERICAN SILK COUNCIL, INC.

THROWN SILK

ORGANZINE

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Specialists To The Yarn Dyed Weaving Trade

*Traditionally....
nothing but the best will do....*

For over a century, William Skinner has made a fine art of weaving
pure silk fabrics. Today's distinguished range of weaves
in precious silk under the Skinner label reflects
a tradition of quality many years in the making.

WILLIAM SKINNER & SONS—NEW YORK 3, N. Y.
WEAVERS OF FAMOUS SKINNER SATIN SINCE 1848.

Skinner
SILK

Skinner
SILK

Skinner
SILK



TRADITIONALLY

TRADITIONALLY FINE



TRADITIONALLY FINE SILKS

TRADITIONALLY FINE SILKS

• TRADITIONALLY FINE SILKS • TRADITIONALLY



S I L K S O F D I S T I N C T I O N



105 WEST 40TH STREET

SHOW ROOM AND SALES OFFICE

LONGACRE 5-4217-4218



presenting...

The

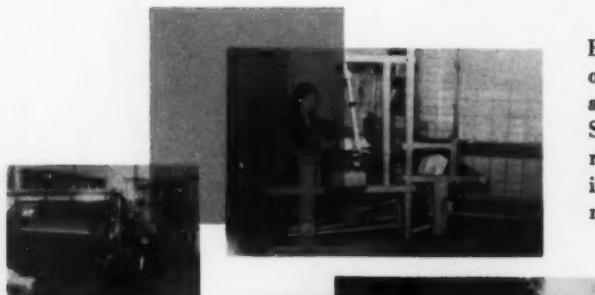
COHAMA
Imported silk

collection

*"New stimulation, new inspiration,
new horizons await America's lead-
ing designers, manufacturers and
retailers from this exclusive group
of fabulous silk fabrics, many com-
pletely new to the American market.
Truly the most vital new influence
in today's fashion world . . ."*



Fabulous Silk Fabrics from Lands of Fable.....



Brilliantly expressed in this exotic collection of Cohama imported silks is the exquisite individual artistry of the primitive native craftsman. Subtle nuances of color, weave, pattern and print reflect the delicate beauty of ancient oriental handcraft... inject daringly dramatic accents to the modern fashion trend.



Included are authentic "cottage industry" fabrics, native-conceived and native-produced from filament to finish. Among these superb textures, keyed to the coming season, are: crisp yarn-dyed shantungs, permanent-finish organdies, washable silk shirting stripes, magnificent hand-stencilled silks, etc. All are Cohama exclusives, all of unsurpassed quality, all realistically priced.

The swatches opposite can but barely suggest the wide diversity, the infinite style possibilities, of this exciting new collection. Fashion designers, manufacturers, retailers and editors of vision and vitality who have already previewed the line have expressed enthusiastic acclamation.

COHAMA

imported silks

KASURI MEISEN

Pure silk, yarn-dyed shantung. Hand-woven. Contrasting colored geometric patterns. A slightly bouffant crispness for softer tailored Spring and Summer dresses. An adaptation of the traditional native kimono, Americanized in color and design, but retaining native influences.

HAND-STENCILLED PRINTED SILK

One of a wide range of designs, processed by an unusual native printing technique, and reflecting the art and skill of centuries of Oriental culture. Includes many reproductions of ancient tapestries and antique fabrics. For colorful under-coat dresses, blouses, robes, negligees.

WASHABLE WOVEN SILK SHIRTING STRIPES

From a diversified group of multi-colored stripes, in pure spun silk shirting. For sports dresses, shirts, pajamas, scarfs.

YARN DYED SILK ORGANDY

Permanent finish pure silk. Crisp, cool. In a wide variety of softly muted hues with deep tone surface. For high-fashion evening dresses, garden frocks, summer town wear, softly styled blouses.

YARN DYED SILK ORGANDY

Pin check design in yarn-dyed pure silk organdy. Permanent finish. Sharply etched, trimly tailored pattern for youthful Spring and Summer urban dresses, junior frocks, tailored but feminine shirt blouses. In a wide variety of vivid colors with white check and contrasting tone check.

YARN DYED SILK ORGANDY

One of many plaids in pure silk, yarn-dyed, permanent finish organdy. For Spring and Summer town wear, dinner dresses, party dresses, dressy blouses.

Not shown among these samples, but comprising an important part of the Cohama imported silk collection, are: Silk taffetas, silk triple sheer, spun silk shirting crepes, pongees, in several weights and solid color silk shantungs.

COHAMA will SAY IT WITH SILK to AMERICA

Almost as important as the Cohama imported silk collection itself will be Cohama's dramatic *multi-market* advertising campaign, designed to reach multi-millions of fashion-conscious women in 1951. For Cohama *imported* silk is the *important* fashion news for Spring. And the Cohama "silk story", told in dramatic *full-color* pages in the leading national magazines — *sold to your customers, in your markets* — will be the "profit story" for '51.

THE HIGH FASHION MARKET



THE HOME SEWING MARKET



THE CAREER GIRL MARKET



THE MASS MARKET



COHAMA IMPORTED SILK...

*millions of women
will read about it ...
know about it ...
talk about it ...
through Cohama's
complete coverage of
every fashion market:*

COORDINATED SALES PROMOTION AIDS ... will enable participating manufacturers and retailers to tie in with this powerful nation-wide promotion ... to win prestige and leadership in *their* particular markets ... to focus the force of this campaign towards building *more* business, *better* business *for them!*

It'll PAY YOU TOO, to SAY IT -with

COHAMA
imported silks

BOUCHARD CHARVET

Cutting the Kohinoor Diamond... restoring a Rembrandt... dyeing and finishing fine silks... require an appreciation for, an awareness of, and a rare skill in bringing to the eye and to the touch all of the nascent richness which dwells within Nature's masterpiece.

For generations this organization has been steeped in the tradition and artistry of Silk Dyeing and Finishing, and has thus developed a precious and prized reputation for attaining the finest...

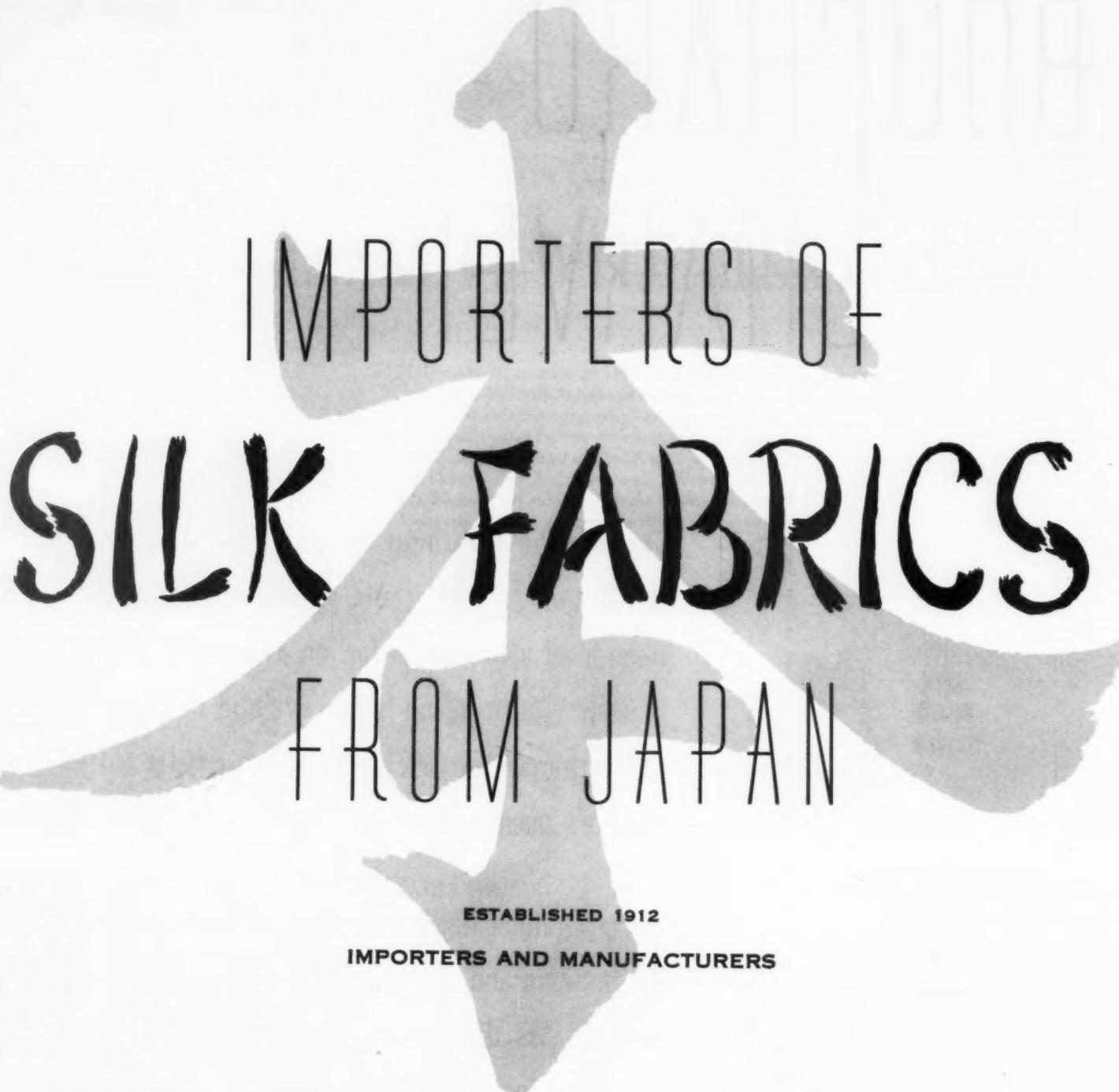
Bouchard & Charvet
Dyeing & Finishing Co.

105 WEST 40th STREET

NEW YORK CITY

182 SHERIDAN AVENUE

PATERSON, N. J.



IMPORTERS OF
SILK FABRICS
FROM JAPAN

ESTABLISHED 1912

IMPORTERS AND MANUFACTURERS

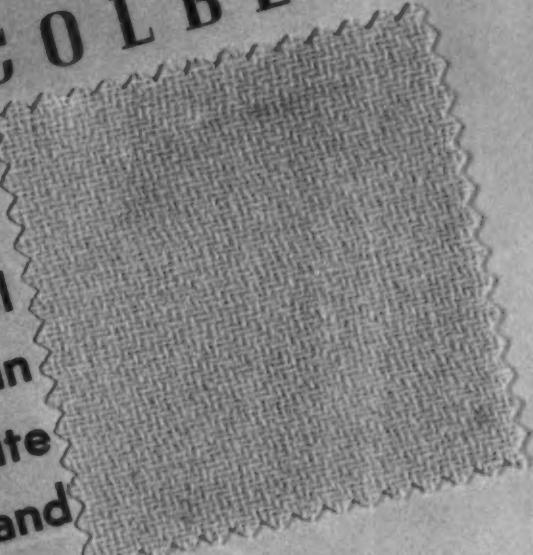
WALTER STRASSBURGER & CO., INC.
TEXTILES

180 MADISON AVENUE, NEW YORK 16, N. Y.
OFFICES IN TOKYO, KOBE AND LOS ANGELES

Farnsworth presents

COLBERT

100%
pure
wool
in
white
and
pastels



virgin
pure
wool

FARNSWORTH & FARNSWORTH

40 WEST 40 STREET

NEW YORK CITY 18

FRANK W. KUNZE CO., INC.

Empire State Building

350 Fifth Ave.

New York I, N. Y.

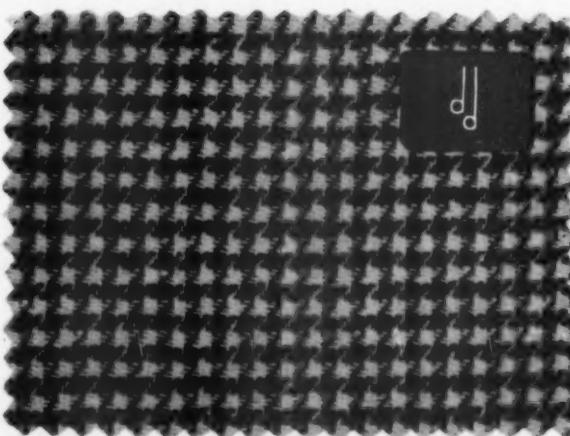
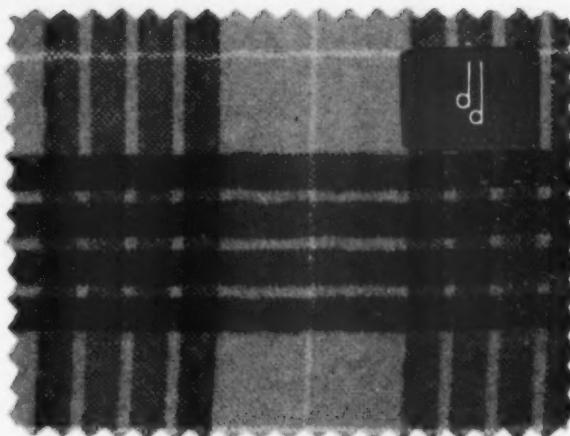
Raw Silk
Thrown Silk

design development

Dunderry of Rockford are Design Development Specialists in an age devoted to mass production. For over 25 years we have worked closely with manufacturers in the sportswear, separates, dress, and children's wear fields.

Let us show you a really flexible operation able and willing to create special effects designed to your individual needs.

Our Spring line of 100% light weight wool and wool and nylon fabrics include checks, plaids and clan tartans; and merits your consideration.



 dunderry of rockford
®

Division of ROCKFORD TEXTILE MILLS Inc.

Sales office EMPIRE STATE BUILDING

Rockford, Ill.

New York 1, N. Y.

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NIPKOW &
KO BELT**
INCORPORATED

468 FOURTH AVENUE, NEW YORK 16, N.Y.

Importers of Raw Silk
Silk Piece Goods

Sole Distributors in U. S. and Canada

Societe Anonyme

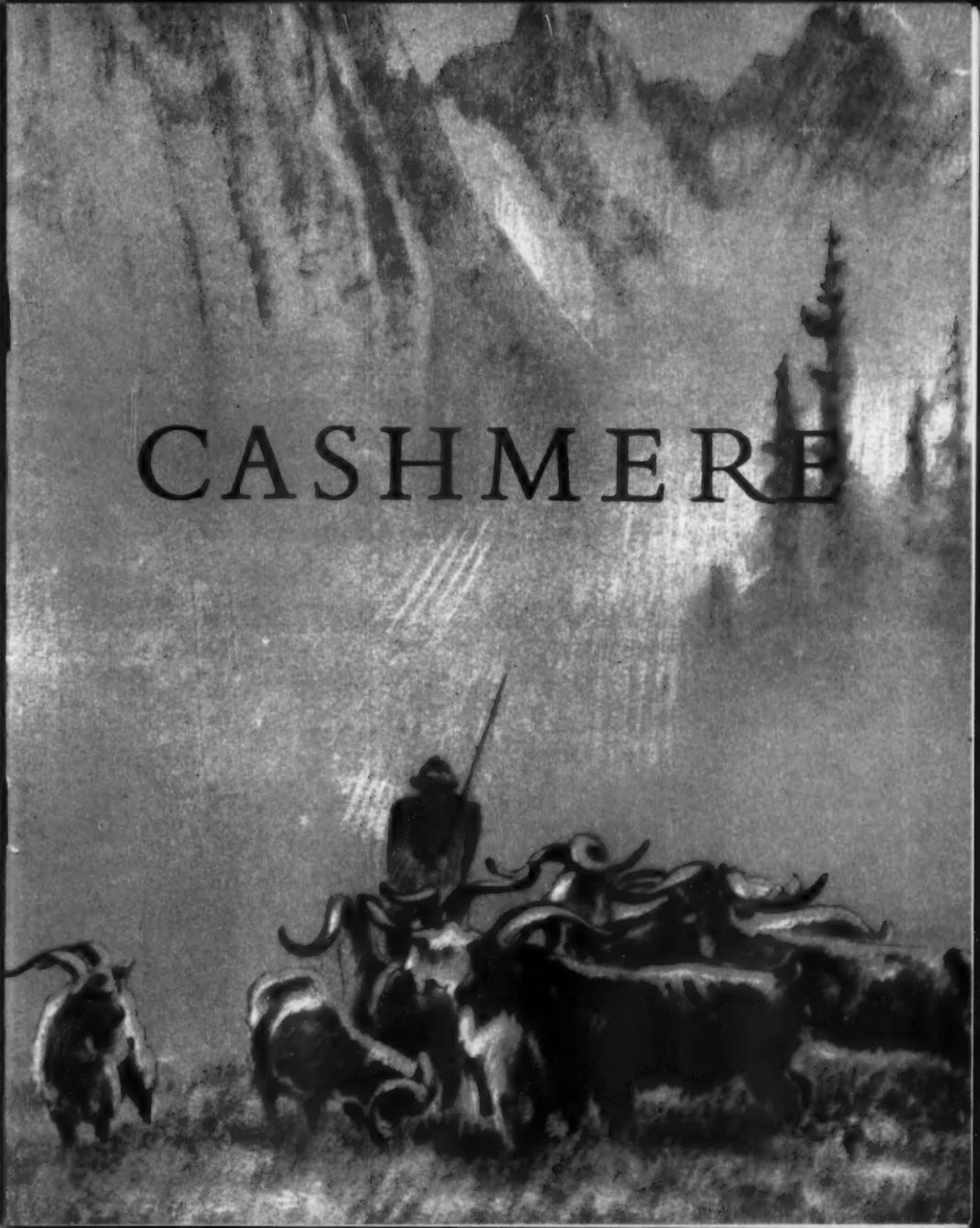
FILATURE DE CHAPPE RINGWALD

Basel, Switzerland

Established 1822

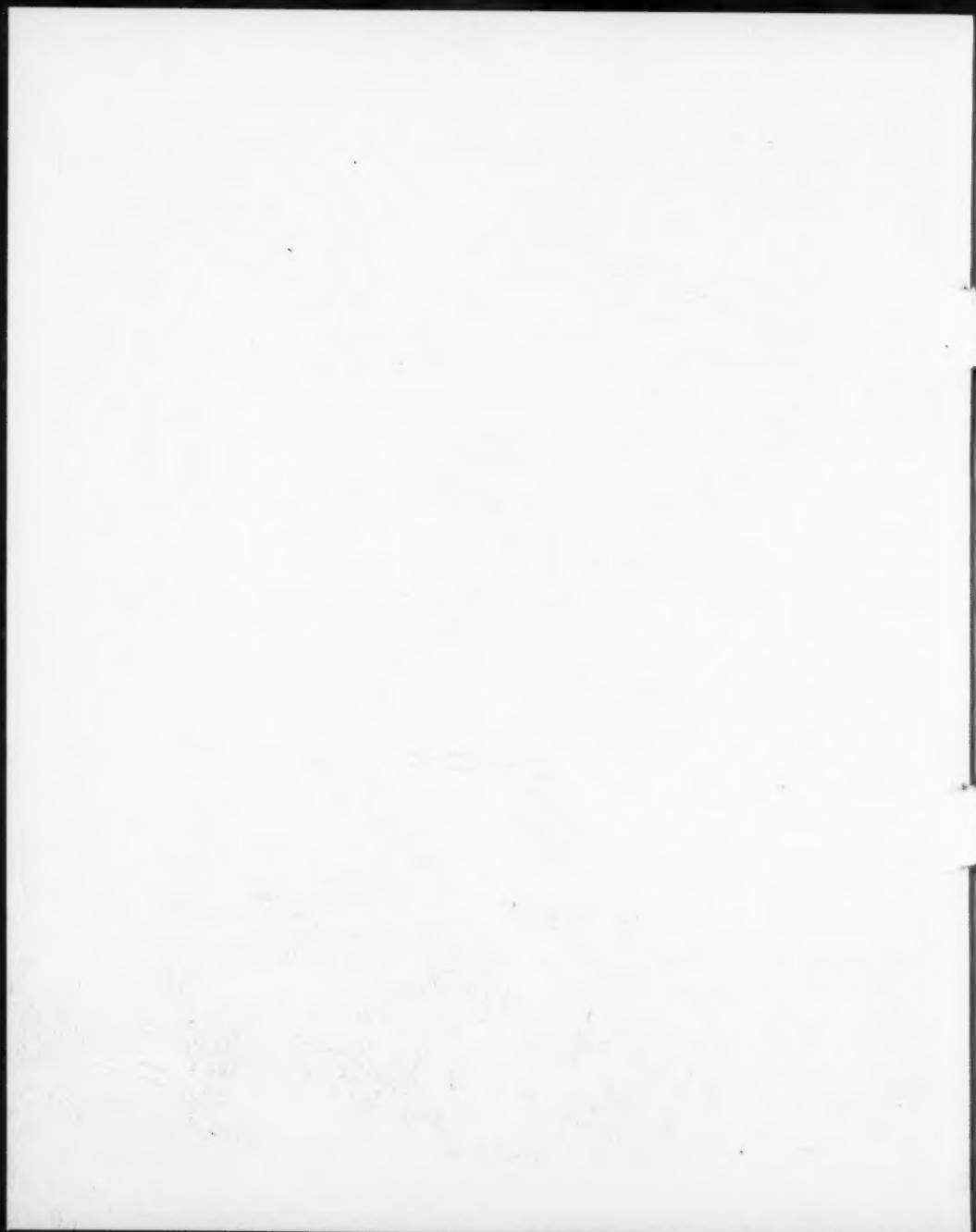
Fine Spinners of Silk Yarns and Blends

- SPUN SILK
- SPUN SILK AND TUSSAH
- SPUN DOUPOONI
- SPUN SILK AND ALPACA
- SPUN TUSSAH AND ACETATE
- SPUN RAYON NOVELTIES



CASHMERE





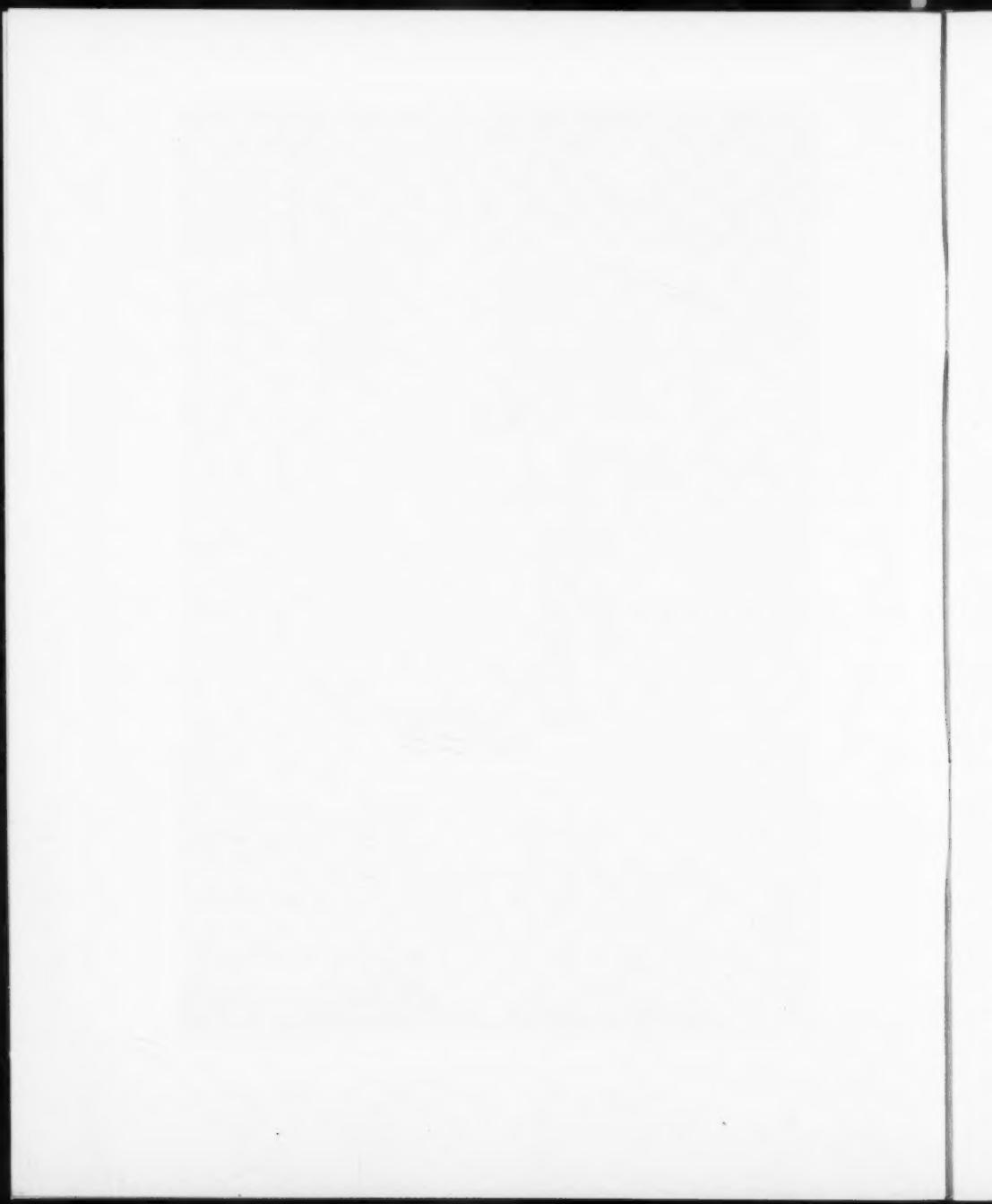
CASHMERE



BERNHARD ALTMANN

NEW YORK — VIENNA (Austria)

SAN ANTONIO (Texas) · BRADFORD (England)





DELICATE BRIGHTNESS. Softness.
Gentle warmth. Lightness. An almost alive
ability to drape itself. This is cashmere cloth.
It is one with royal ermine, one with supple
brocade.

The sheer craftsmanship of those many artisans whose mighty labors create this work of art—your cashmere garment—produces a tactile and visual delight just as keen to the senses as a Beethoven Symphony or a Shakespeare sonnet to the ear, just as unforgettable as the bouquet of a fine wine to the discriminating palate, just as evernew as the warm smile on the face of an old friend.

Yes, the aesthetic sense of wellbeing is unmistakably there when one touches this unique fabric, when one feels the warm embrace of its thistledown weightlessness.

But the older magic of this fabulous cloth speaks to us in the places, in the history, in the men we conjure up when we think of

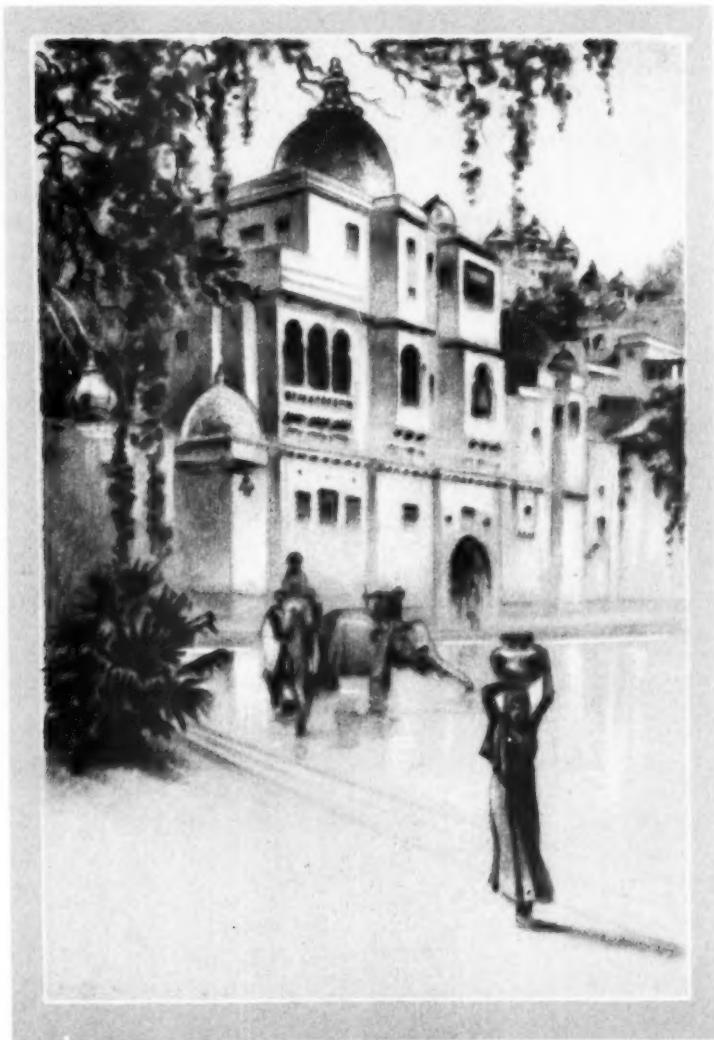
proceeds



LANDSCAPE IN KASHMIR

KASHMIR

Kashmir: bazaars and plodding caravans; Oriental merchants and handicraftsmen; the Vale of Kashmir, that fairyland where living flowers, not the mille-fleurs of tapestries, delight all our senses—the Vale of Kashmir where opulent maharajahs and maharanees chose to live their magnificently Oriental lives, the last outpost of civilization, of luxury, of comfort before the forbidding mountain masses of the impenetrable Himalayas, the place where were woven the exquisite Kashmir shawls of prehistoric patterns prized by the Roman Caesars and prized centuries later by the French and British Courts, the King of the Belgians, the Duc de Berri and a few fortunate others.



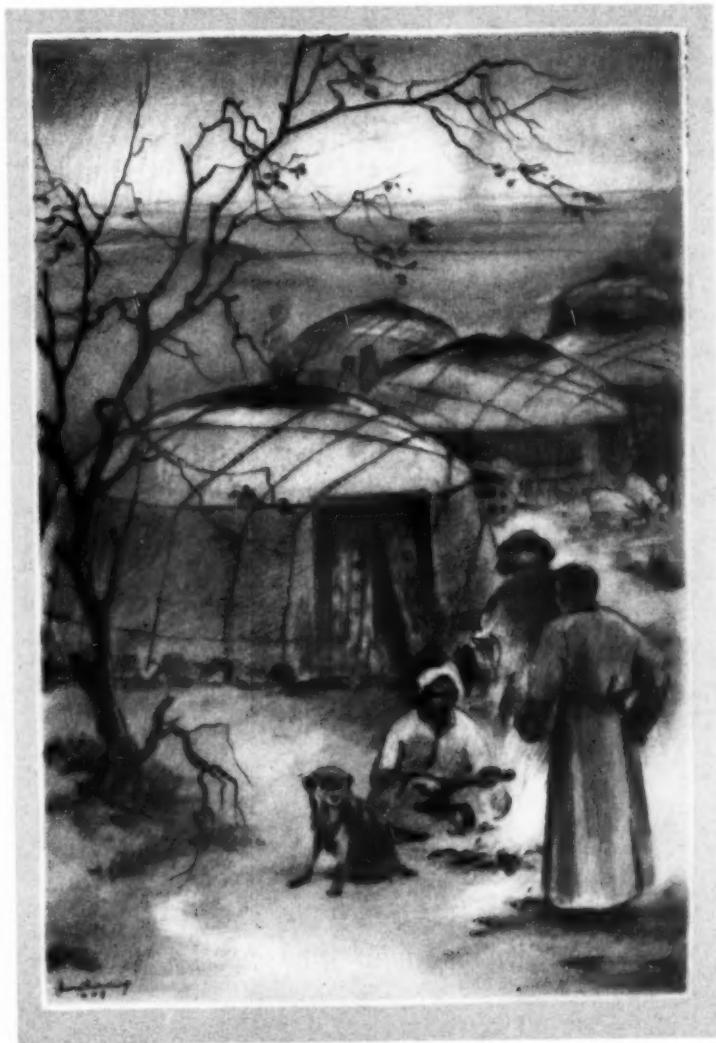
PALACE OF A MAHARAJAH

*A*ctually, but little of the cashmere wool of today comes from Kashmir, nor is the world supply proportionately much greater than in those storied yesterdays when ermines, brocades and the rare yarns of Kashmir were only for kings and their courts.

Most of today's cashmere fleece comes from farther north — the best grades from China, Inner and Outer Mongolia, Manchuria and Tibet.

The fleece is found only on a strange domestic animal whose only habitat is the remote fastnesses of Central Asia. The horned cashmere goat is small, shortlegged and graceful. It is a humble, frugal animal able to





MONGOLIAN YURTS

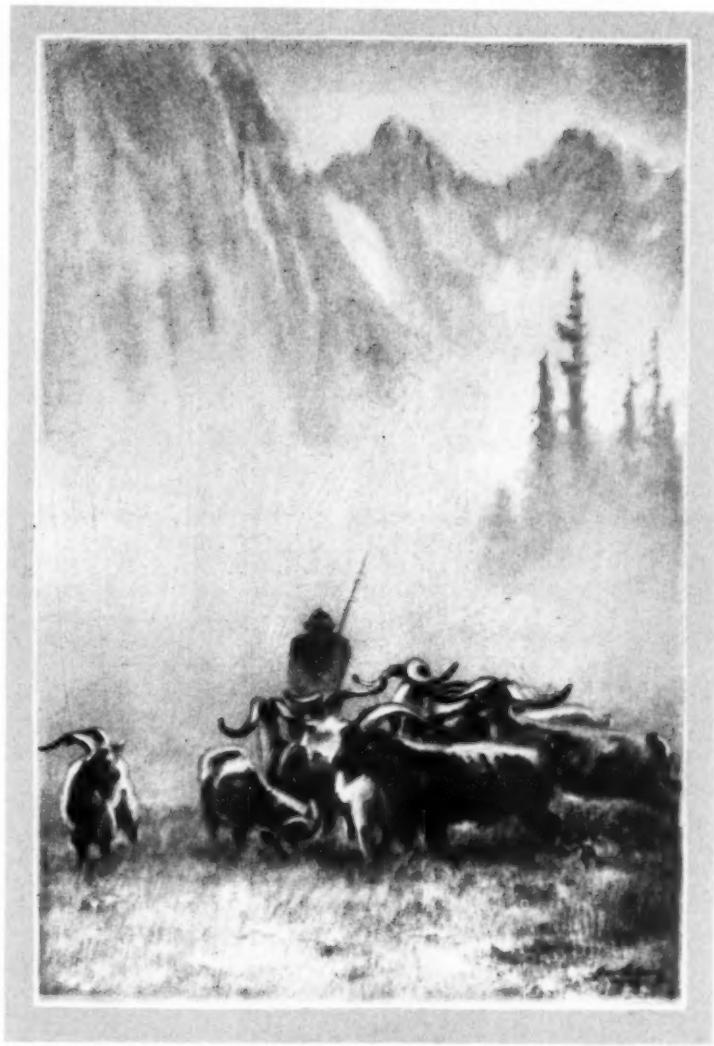
subsist on little food, protected from the extreme cold by a warm undercoat of fine fleece and by a thick outer coat of coarse hair against the severe hardships of the mountain winter.

The finest fleece is found on animals living at fantastic heights. The higher the mountain, the sparser the vegetation, the finer the yield. The natural shades are gray, brown and white.

White cashmere is rarest of all and commands a premium price, especially when pastel shades are in fashion.

The cashmere goat produces very little: a male about four ounces and a female about two ounces per year. A year's yield from four to six animals is needed for a sweater and the yield from about twenty goats for an overcoat.

The animal is never shorn. The soft fleece is plucked or combed out by hand. Much of



CASHMERE GOATS

it is collected bit by bit from the shrubs on which the animal scratches to rid itself of its itching coat during the molting time in the Spring.

Quite naturally, much of the coarse outer hair is mixed with the soft wanted fleece during the first handculling processes and these unwanted hairs must be painstakingly removed.

But, even after this handsorting process, some coarse hair plus much fine black hair will remain. These again must be removed by a highly intricate process with machines especially built for the task. We are not surprised now to be told that during processing from animal to finished product cashmere loses from one-half to three-quarters of its original weight.

Because of the rigors of the natural habitats of cashmere goats and their vast



TIBETAN WOOL-CARRIER

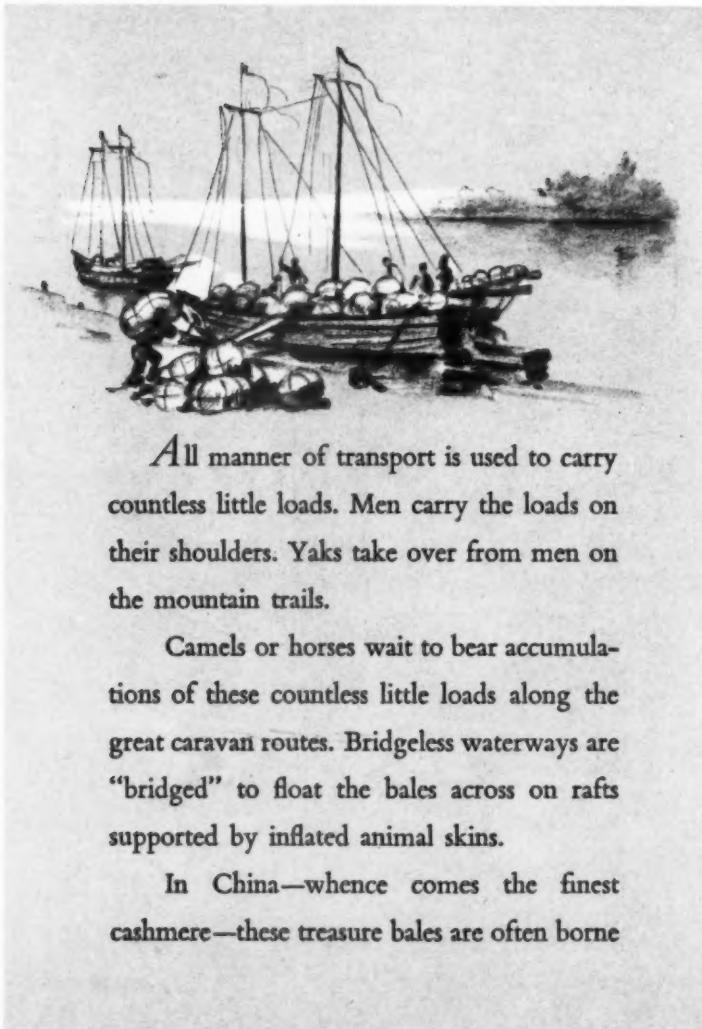
distances from the world market, there can be no reliable statistics as to a probable annual yield, nor as to the number of producing animals.

Postwar statistics are lacking but we know that wars and revolutions have had their inevitable influence on the supply of fine cashmere: it is scarcer and more precious than ever.

*H*ow the cashmere bales finally reach their markets is one of the miracles of world trade. Often a year is needed before the fine fleece from Inner-Asia finally reaches the ports on the China Sea. In that year of travel the bales spend months on the Great Silk Road which wound along its tortuous way long before the dawn of history and which Marco Polo explored in the thirteenth century.



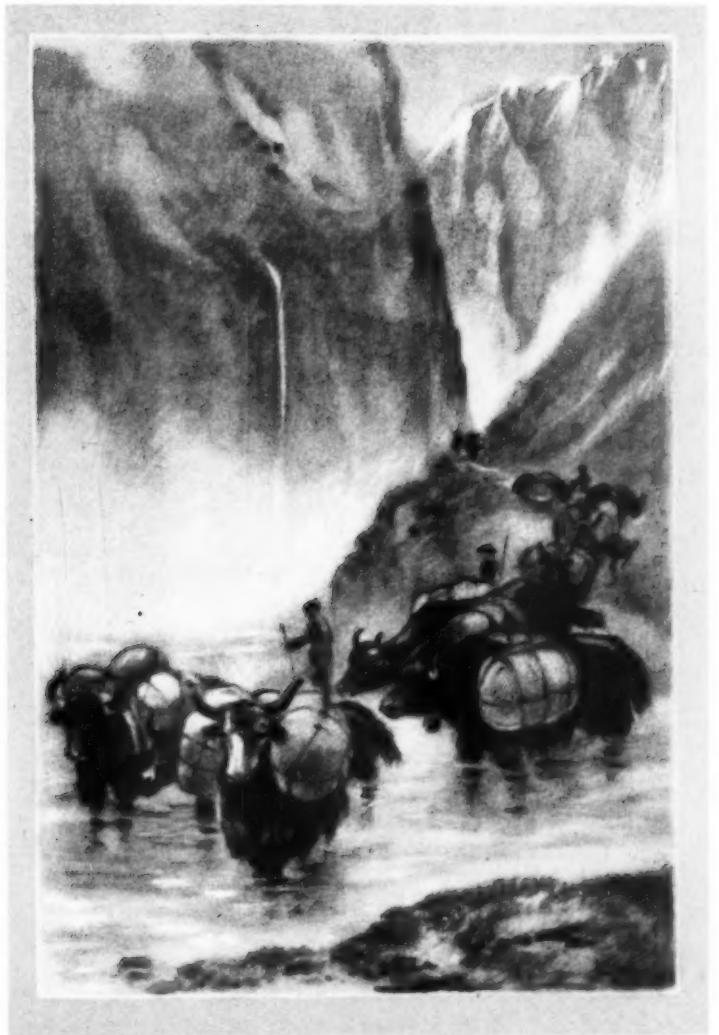
THROUGH THE GOBI DESERT



All manner of transport is used to carry countless little loads. Men carry the loads on their shoulders. Yaks take over from men on the mountain trails.

Camels or horses wait to bear accumulations of these countless little loads along the great caravan routes. Bridgeless waterways are "bridged" to float the bales across on rafts supported by inflated animal skins.

In China—whence comes the finest cashmere—these treasure bales are often borne



YAK CARAVAN

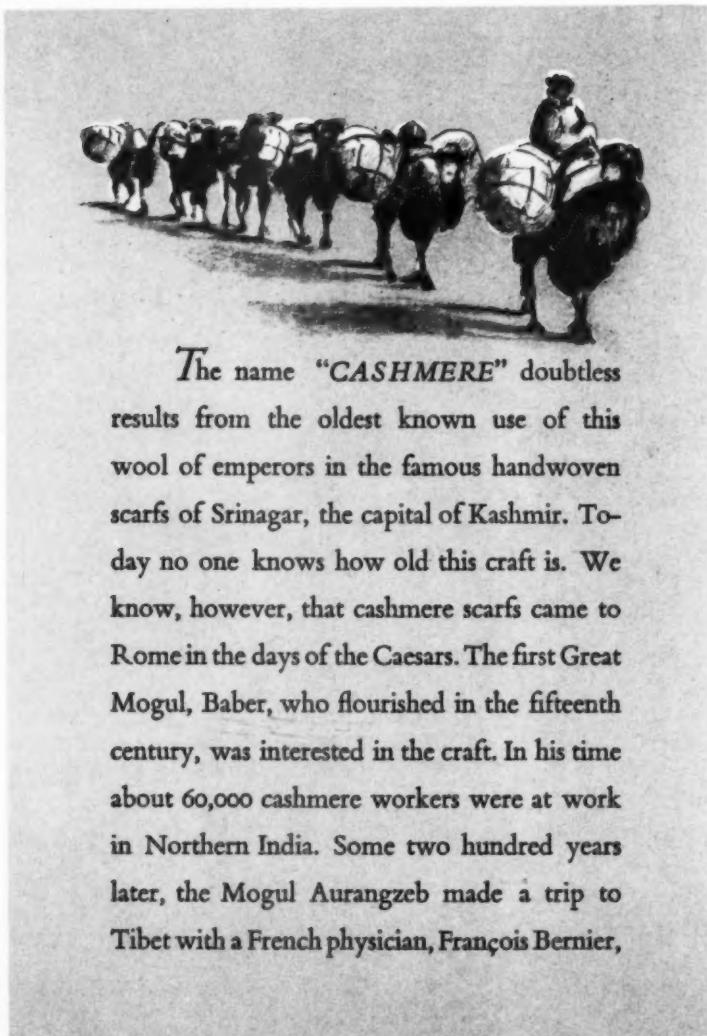
on bamboo poles by two coolies who run for long distances over precipitous terrain for hours on end. If a particularly long stage of the journey is before them, a spare coolie will run alongside to relieve one or the other of the team. This he does without breaking stride even for a moment.

The fact that these coolies know they are only one link of a transport chain of which another has been the plodding yak does not slow their rhythmic race to get their precious bales nearer their destination.

When they come to the bank of a great river, they delicately balance the bales on a narrow plank on board a junk. Finally, in the holds of these colorful dragon-shaped junks, the bales sail to the great ports where Occidental ocean steamers wait to bear them to their world market.



... AND CHINESE COOLIES



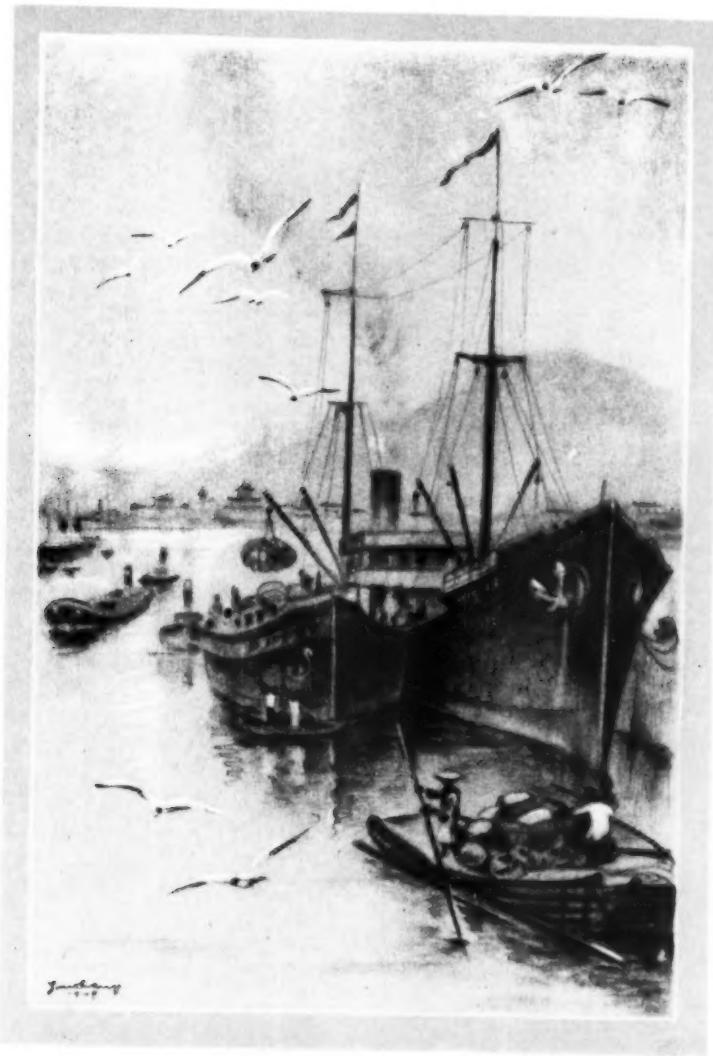
The name "*CASHMERE*" doubtless results from the oldest known use of this wool of emperors in the famous handwoven scarfs of Srinagar, the capital of Kashmir. To-day no one knows how old this craft is. We know, however, that cashmere scarfs came to Rome in the days of the Caesars. The first Great Mogul, Baber, who flourished in the fifteenth century, was interested in the craft. In his time about 60,000 cashmere workers were at work in Northern India. Some two hundred years later, the Mogul Aurangzeb made a trip to Tibet with a French physician, François Bernier,



LOADED ON THE JUNK

in his retinue. Bernier was the first European to see the wild and the domesticated cashmere goat and wrote of this wonder to Europe. From Roman days until the sixteenth century Europe was without cashmere scarfs. From the beginning of that century they have been known to the Western World. Empress Eugénie, wife of Napoleon III, started a vogue. In her day a fine scarf commanded as much as \$ 500. Paisley shawls when first woven in England around 1800 were copied from the designs of Kashmir. For seventy five years they were the symbol of luxury and - were even exported to India.

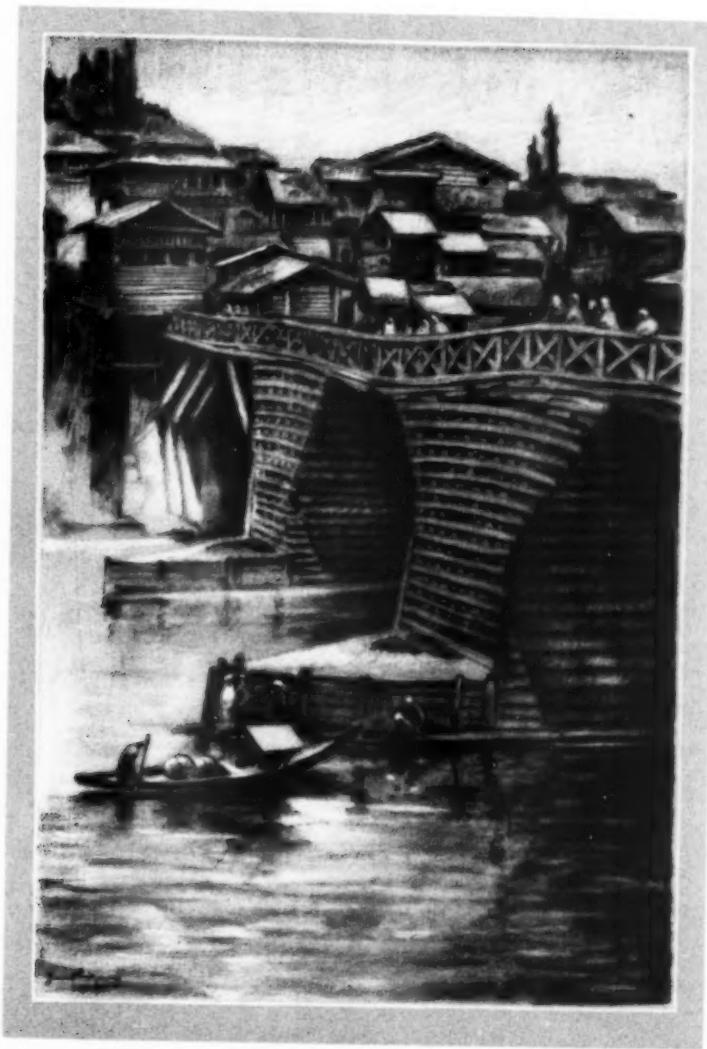
Following the industrial revolution and the upsurge of their textile industries, England and Scotland, led the world in the sorting, cleaning, spinning and weaving of fine cashmeres. Recently the United States and Austria have entered in these fields.



ON THE PACIFIC COAST

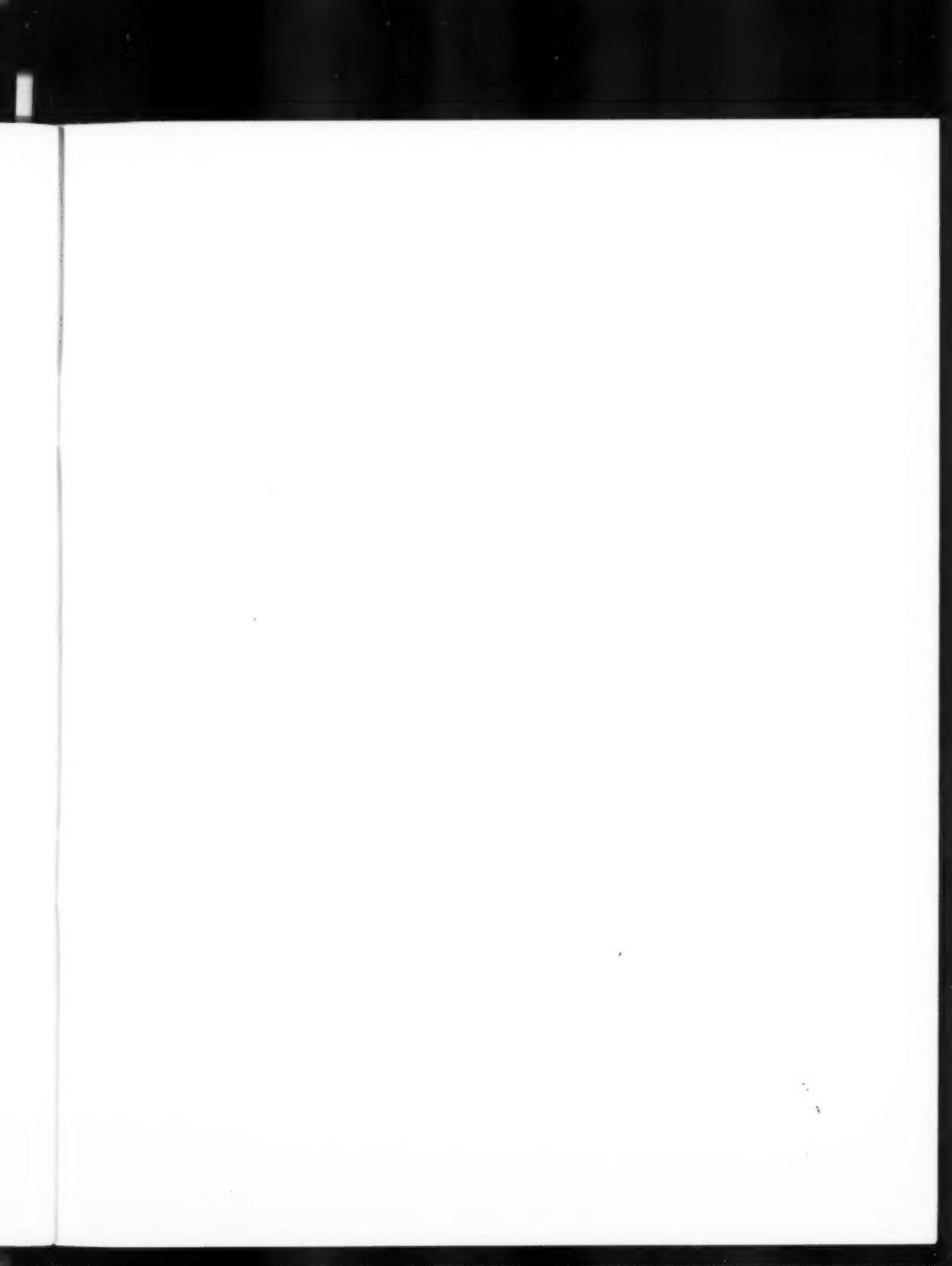
The concerns controlled by
THE BERNHARD ALTMANN CORPORATION
in NEW YORK
and its associated corporations in
VIENNA, AUSTRIA
and
SAN ANTONIO, TEXAS

spin, weave and knit cashmere. In their various establishments they produce sweaters and vests for men, pullovers and cardigans for women; featherlight scarfs in gay colors, socks of plain, ribbed and argyle designs which are light and soft yet amazingly warm. Fabrics are woven for men's and women's topcoats, for sportswear and for robes. During years of continuous effort and experiment, our organization has improved

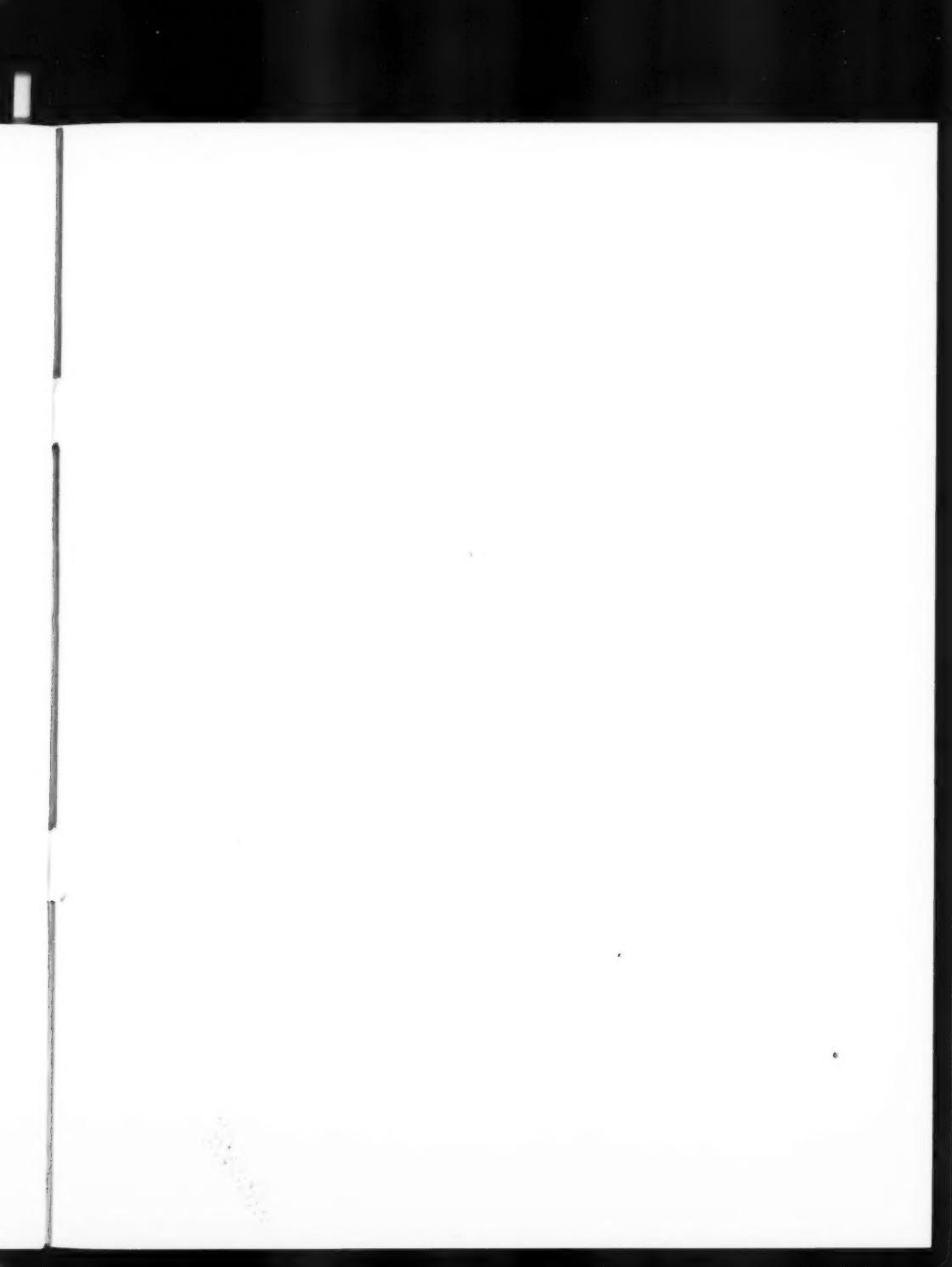


FROM SRINAGAR, THE CAPITAL OF KASHMIR

production methods with two important results: its cashmere products are of outstanding—indeed unsurpassed—quality; production and cost and prices have been so reduced that cashmere apparel—until yesterday affordable only by the few—can now be bought on any average clothing budget. Thousands and thousands of discriminating men and women in the United States and all over the World have received these fine cashmere products of the Bernhard Altman organization with enthusiasm during the last year.

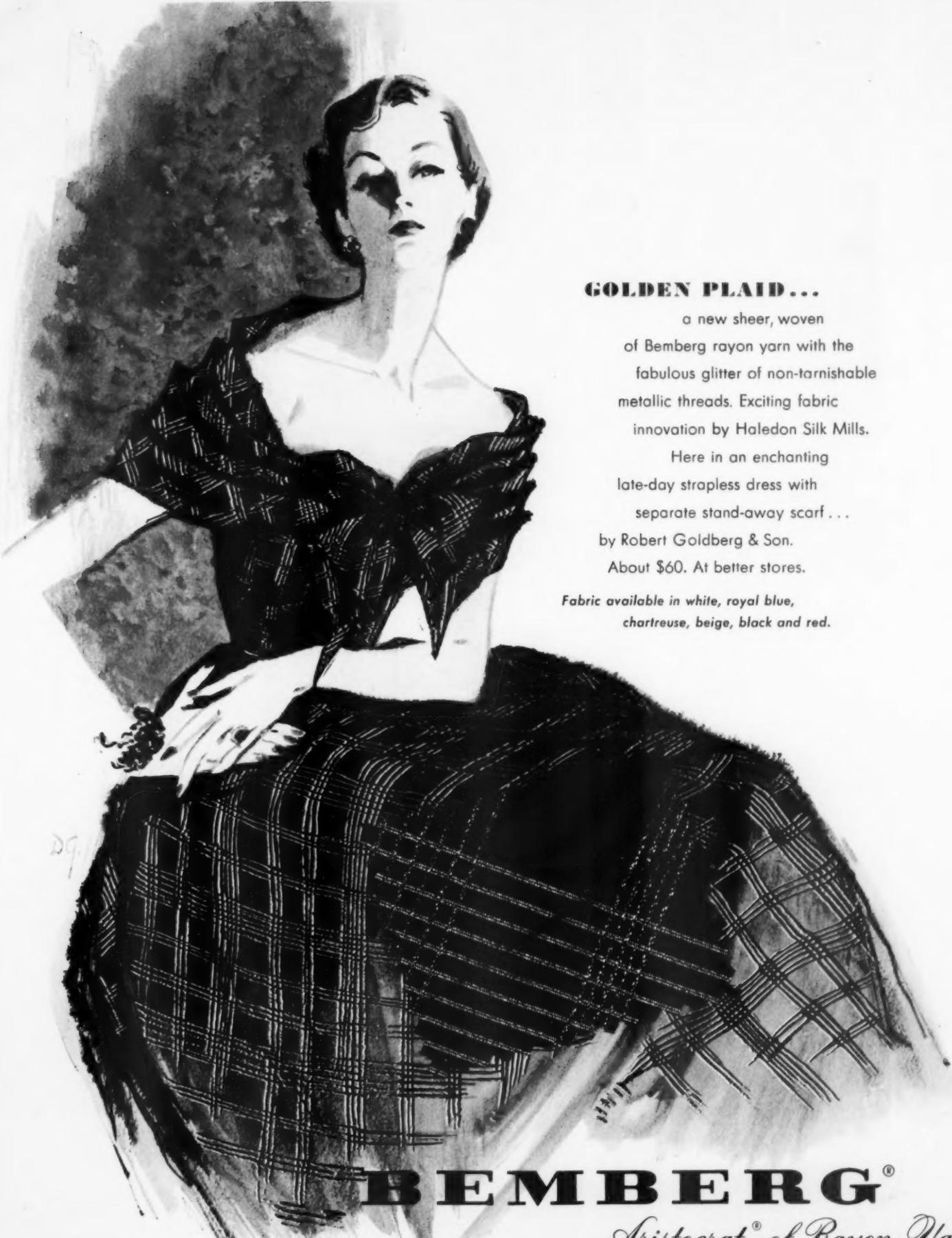


Published 1950 by
Bernhard Altmann, New York, Vienna (Austria),
San Antonio (Texas), Bradford (England)
Color drawings by Hans Lang, Vienna
Printed in Austria
by Brueder Rosenbaum, Vienna



CASHMERE





GOLDEN PLAID...

a new sheer, woven
of Bemberg rayon yarn with the
fabulous glitter of non-tarnishable
metallic threads. Exciting fabric

innovation by Haledon Silk Mills.

Here in an enchanting
late-day strapless dress with
separate stand-away scarf...

by Robert Goldberg & Son.

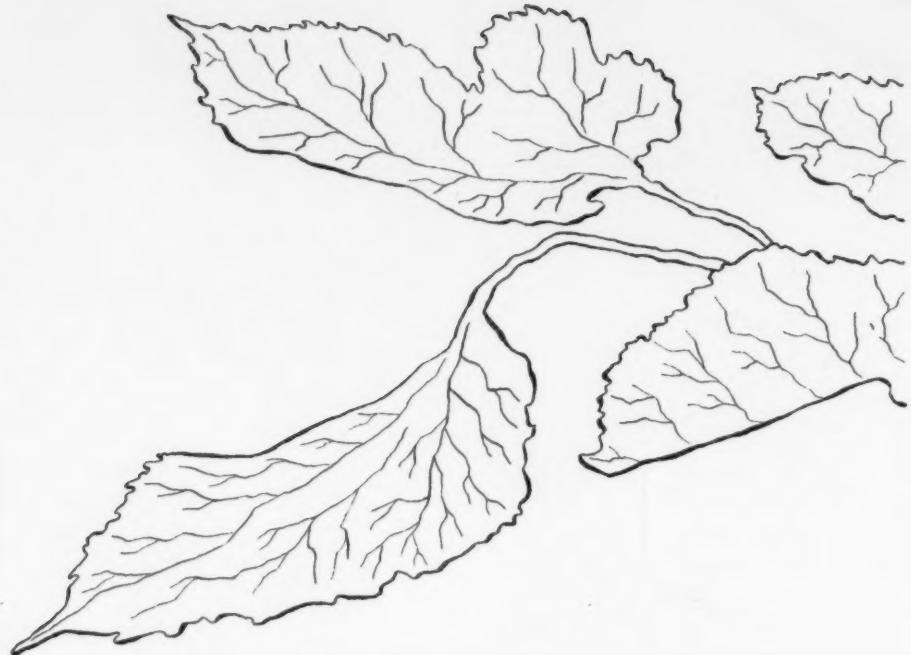
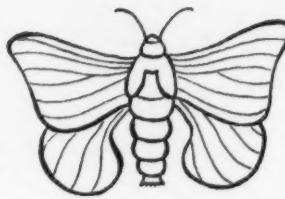
About \$60. At better stores.

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chartreuse, beige, black and red.

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Mulberry leaves and Moths and Martin

Silk needs no superlatives... it was born beautiful.

Martin knows the ways of silk. You have heard of us
for many years as leaders in silk throwing.

Our silk ribbons are beautiful and long-wearing.
They come in a rainbow range of shades...
for whatever a woman wears, nothing trims like Martin Silk Ribbons.

You know our all-silk and silk-velvets... those naturally
crush-resistant, fabulous fabrics. Silk gives them a soft, flowing
drape, or a luxurious crispness, for silk is most versatile.

If you must find a replacement for other fibers that may be
scarce, turn to silk, and use it widely. You will be very successful.



48 WEST 38TH STREET • NEW YORK 18, NEW YORK



American Fabrics
presents

The World of Silk





The World of Silk

*The Art and the Craft of Silk Making
have captured man's imagination for more than five
thousand years. Its past history, its present
status, and a glimpse into the future
of this fabulous fiber are narrated in these pages.*

Of all the natural fiber fields which were invaded by the development of synthetics, none showed a greater apathy or a lesser willingness to protect its future than the silk industry. The producers of cotton and of wool were quick to recognize the potential competition of test-tube-born fibers, and equally quick to develop programs of education as well as merchandising strength to retain and even to expand the end uses of their products in competition with synthetics.

The silk industry, however . . . from the cultivator of mulberry trees in the Far East to the finisher of fabrics in Paterson . . . played hare to rayon's tortoise. Imbued with the false sense of security which has always been aristocracy's bete noir, the producers of silk at first refused even to concede the existence and worth of synthetic fibers. By the time rayon had been refined in product and in promotion to the point where it was first line competition, the beginning of World War II deprived American silk companies of their source of raw material and thereby of their weapon of combat. For, during ten long years,

without actual silk in hand it became a matter of pitting words against fabrics.

The inherent virtues of silk, and the determination of the silk industry leaders, assure us that there can be a revival of public interest in this queen of fibers. But the attainment of this objective can result only from a clear and unemotional analysis of the world fiber situation as it exists and not as silk people would like it to be . . . implemented by a realistic program of improvement in the processing, in the fashion development, in the merchandising and promotion, and, finally, in the presentation to both the trade and the consuming public.

Each of the existing fibers . . . wool, cotton, linen and the numerous synthetics . . . chose its niche and then convinced the world of its right to occupy it. Similarly the silk industry must shed its mossy attitude that *l'est . . . c'est Silk*.

During the war years the spinners and weavers of silk turned almost exclusively to the use of rayon. What happened during





this decade? They lost much of the know-how required in the processing of this precious fiber; they lost many of the skilled workers to whom a strand of silk represented the quintessence of quality (we have a new generation of textile workers who are completely unacquainted with silk's background or properties); they lost some of the special machinery developed to bring forth all of the rich properties inherent in silk, and the impetus to make further improvements in silk machines; they lost the continuity of development in dyes and in finishes demanded by a postwar world; they lost the opportunity to gear the production of silk to the world's emphasis on high speed.

Important, too, was the loss of a complete generation of the consuming public. The men and women who today are between the ages of 21 and 30 . . . the twenty-odd millions who represent not only a healthy segment of the current market but a rich potential for the next half century . . . were only 11 to 20 when to all intents and purposes silk was removed from the public scene. This generation hardly knows silk, except as a word; it wore little silk, it felt little silk, its standards of excellence are not based on silk.

But none of these is a barrier to the re-establishment of silk in its proper metier. Just the opposite . . . knowing these obstacles, the industry can chart a program which will overcome each in turn, and then turn it into an advantage rather than a drawback. Foremost, of course, stands the problem of deciding which niche within the greater textile world belongs to silk. It is our belief that the fiber should be merchandised as the CLASS PRODUCT FOR THE MASSES.

Obviously such a promulgation requires that the silk industry utilize not only the natural qualities of the fiber but every modern technological development which has been brought forth since silk became almost dormant at the end of 1939. This embraces chemistry and machinery; it must include spinning, weaving, dyeing and finishing. The ultimate objective before every silk producer must be the utilization of the modern high speed production methods which have assisted the synthetic fibers to attain their present high position; for it is only through the efficient adaptation of these methods and machines that the cost of silk can be reduced to become important to the consuming mass public.

Another problem to be solved is that of making silk com-

pletely washable, or washable in enough end-use products to eliminate both the annoyance and the expense of dry cleaning. Color fastness, resistance to sun fading, shrinkage . . . these are of prime concern to the masses, and must be settled to their satisfaction. The silk industry should concentrate on making luxurious silk as functional and utilitarian as cotton; when (not if) it achieves this status, silk will be well on the way to rehabilitation as a major fiber.

Virtually the entire women's dress field, prior to the Korean conflict, found itself stalemated in the effort to sell merchandise by the consumer's apathy toward existing fabrics. A number of rayon mills had already turned their thinking, and indeed part of their production, to silk as a possible stimulant. This type of thinking is not only sound, but indicative of the fact that the apparel field may have shut the door, but never shut its mind, to the virtues of silk. But it would be a grievous blunder on the part of silk producers to take a passive attitude toward the rayon weaver's open mind. A program of education, of merchandising and promotion should be readied so that, upon the already existing willingness of the mill executive to consider silk can be built a towering and enthusiasm-filled desire to make silk a full-fledged project. Some existing equipment can be converted easily to silk production; already machinery producers are working on new jacquard loom types which are especially suited to silk. The new Crompton S6 loom, as an example, has already proved its worth.

One of the great advantages inherent in silk, and a fact to be merchandised to the utmost, is that silk is so fine that the weaver can attain an incredibly high number of picks into a square inch, achieving a richly crunchy hand.

Nobody knows better than the retailers of America how enormous a market exists for luxury silks. When silk is again made available, at reasonable prices, giving retailers the opportunity to dramatize the richness of silk at prices his customers can afford . . . you may depend upon it that the retailer will be quick to force the manufacturer into broader use of silk. But this time, when the retailer is asked to put his power behind the fiber, the industry must have done a far better job of policing the quality than prevailed immediately following VJ-day.

There was, if you remember, a brief flurry of interest in the
(please turn the page)

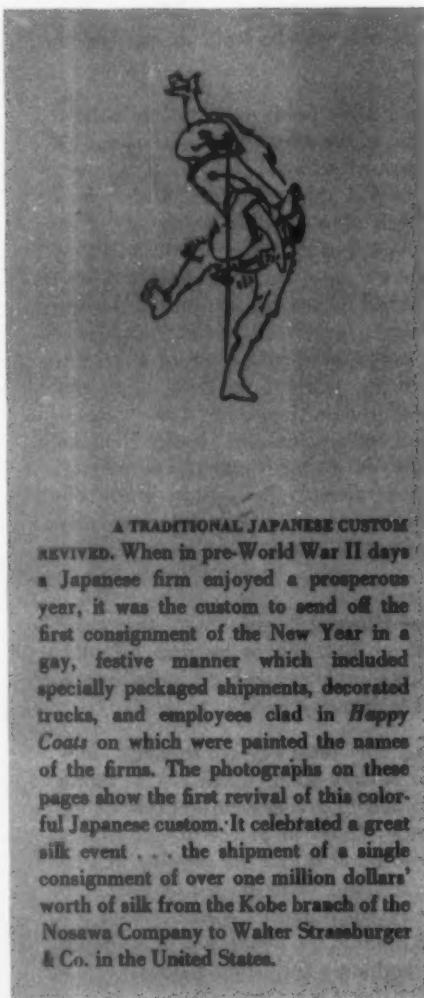




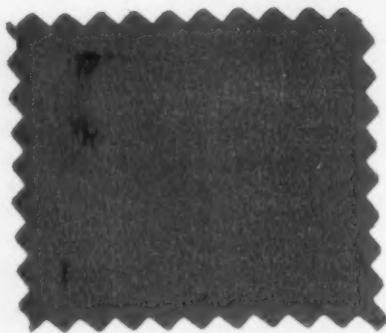
Mr. Idzumi, the director, and his sons wearing Idzumi's Happy Coats.



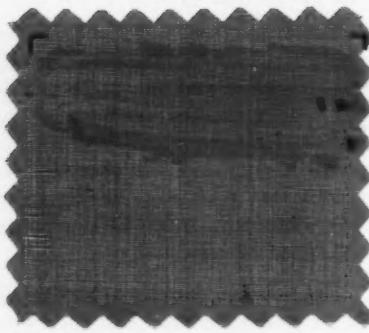
Part of the staff of the Nosawa Company watching the trucks depart.



A TRADITIONAL JAPANESE CUSTOM REVIVED. When in pre-World War II days a Japanese firm enjoyed a prosperous year, it was the custom to send off the first consignment of the New Year in a gay, festive manner which included specially packaged shipments, decorated trucks, and employees clad in *Happy Coats* on which were painted the names of the firms. The photographs on these pages show the first revival of this colorful Japanese custom. It celebrated a great silk event . . . the shipment of a single consignment of over one million dollars' worth of silk from the Kobe branch of the Nosawa Company to Walter Strassburger & Co. in the United States.



SILK satin crepe by SKINNER



SILK iridescent organdy by COHAMA



SILK surrah by STUNZI



SILK printed crepe by ROBAIX

Toasting a good luck in front of the Takasago Warehouse.



Group of staff members of the Warehouse clad in Happy Coats.





Fleet of trucks parading through the textile center.



The World of Silk . . . continued

reappearance of silk; but whether through ignorance or callous disregard on the part of a few firms for the long range gain, the retailer was so badly hurt by defective silk that he dropped the word from his buying vocabulary. Much of the silk which came into this country, it developed, had lain in Japanese warehouses since before Pearl Harbor and was disastrously tender. Other silk yarn fell into the hands of spinners, weavers, dyers and finishers who had neither the knowledge nor the facilities for processing it properly, and would not spend the additional sum necessary to secure proficient assistance. Still another complaint stemmed from the overcharging which prevailed at the beginning; a procedure which the American government should stop at the source, right in Japan.

A hidden virtue within silk is its astonishing durability despite its fragile appearance and hand. Men have been known to wear silk shirts, pajamas, and even suits, for half a dozen to ten years without repair or replacement. Because of its resistance to abrasive wear, silk is an economic fiber in the long run; and the industry should stress this point in its selling.

Those within the industry know of the hidden ruses which can be and, unfortunately, were used by unscrupulous people to

capitalize on the appeal of silk while they removed part of its value. Sleazy constructions and weighting, in particular, were the most common methods used; and it is not only to the interests of the entire industry but, with the strong competition of synthetics, almost a vital necessity that certain standards of quality should be upheld by all producing companies. Perhaps the form of such controls should be an organization similar in some respects to the Guilds of the Middle Ages. The main point is that silk has another chance to regain its pre-war position . . . and even to surpass it. It would be unrealistic to assume the attitude that those at the steering wheel of the silk industry are unaware of the problems which face them in the re-establishment of silk in its rightful high place. It would be more unrealistic to imply, even faintly, that the brilliance, the brains, the foresight, as well as the financial resources, will not be used to attain this objective. Silk will, in our lifetime, again become the synonym for quality . . . not only at the top income level, but among the mass consumers. It has too many virtues to miss its mark.

Now let us proceed to a modest history of silk through many centuries, and then to a study of the qualities and attributes which make silk so great . . .

Mr. Ikuomi and his manager pose in front of one of the trucks.





CHRYSANTHEMUMS IN A FLORAL ARABESQUE . . . silk fragment from an early Chinese textile design

SILK . . . SHAPER OF DESTINIES

*Where Wormes and Food doe naturally abound
A Gallant Silken Trade must there be found.
Virginia excels the World in both —
Envie nor malice can gaine say this troth!*

THE TREMENDOUS ECONOMIC IMPACT that silk has exerted in various civilizations, in all parts of the globe, forms a special and important history by itself.

Most historians agree that silk and sericulture had their origin in the dim antiquities of China between eight and ten thousand years ago. According to Chinese records, the silk industry became an important factor in Chinese economic life when the Empress Si-ling, wife of the famous Emperor Huang-ti (2640 B.C.) made it fashionable to cultivate the mulberry tree, rear the silk moth (*Bombyx mori*), and reel the silk. Ancient Chinese literature credits Si-ling with devoting herself, personally, to the care of silk worms and to the invention of the silk loom. There is a vast compilation of ancient literature dealing with the importance of Chinese sericulture and the attention

bestowed upon it by royal and noble families which followed Si-ling's example. The silken fabrics were used by the aristocracy of ancient China as a medium of exchange.

The Chinese not only used silk fabric for clothing, but soon effected new means of employment for thousands of citizens by employing silks for wall hangings, paintings, religious ornamentation, interior decoration, and for the maintenance of ecclesiastic and Imperial records. Caravans from all over the world exchanged their loads for this priceless fabric, and thus China prospered. Naturally, the Chinese guarded the secrets of their precious craft with fierce jealousy. It meant death by torture to spread this knowledge beyond the borders imposed by Imperial decree.

Japanese Beginnings in Sericulture

Many centuries passed before the knowledge of the silk worm and its product were smuggled into Japan through Korea. While silk fabrics were already known to the Japanese as well as to parts of the Western world, the art of sericulture; according to the Nihongi (one of the most ancient of Japanese histories),



was not practised in the Land of the Rising Sun until 300 A.D.

At that time, the Japanese negotiated with Korean agents to engage experts from China to teach the art of weaving and manufacturing silk fabrics. There is a temple in the Province of Settsu which was erected in honor of the four Chinese concubines who were smuggled into Japan to instruct the Japanese Court and the nobility in the art of making plain and figured woven silks.

Japan, at this time a nation of two extreme castes . . . the feudal lords (Daimios) and the peasantry . . . eked out an economic existence by scanty agriculture, war and piracy. But the soil of Japan, plus the indefatigable industry of the peasant, gave great impetus to the silk industry. The ruling powers realized the importance of this new industry and nurtured the economic infant until it grew to national importance. For 1600 years, silk was the vital factor that transformed these tiny isolated islands into a world power.

About 400 A.D., a Chinese legend says, the eggs of a silk moth and a seed of the mulberry tree were taken to India by a Chinese princess who concealed them in the lining of her head-dress. It is now known that sericulture was first established in India in the tract of land which lies between the Ganges and the Brahmaputra Rivers, a valley admirable for the raising of mulberry trees, and easily reached by the overland route from China. However, certain Sanskrit writings claim that silk manufacture was practised in India as early as 4000 B.C. Whether this story denotes the manufacture of end products from silk or the weaving of silk is not clear. Probably it is the former. The Rajahs and Brahman caste of India were extremely partial to silk. This desire for luxury, particularly for the luxury of silk, brought about the tremendous taxation and serfdom which made India a poverty-stricken nation until this Century.

The Silk Path to Europe

The path of silk followed the westward overland route; slowly it led to Khotan, Persia, and Central Asia. It was in the latter place that the Greeks first became acquainted with the fabulous fabric. The philosopher Aristotle, in his Hist. Anim. Volume 9, was the first Western writer to describe the silk worm. He called it . . . "a great worm which has horns and so differs from others. At its first metamorphosis, it produces a caterpillar, then a bombylius and, lastly, a chrysalis . . . all these changes taking place within six months. From this animal, women separate and reel off the cocoons and afterwards spin them. It is said that this was first spun in the Island of Cos by Pamphile, daughter of Plates."

Aristotle did not know that raw silk was imported by Cosians long before his writing. The famous *coa vestes* . . . the gauzy tissue which revealed rather than concealed the bodies of the high placed . . . had its origin in this Island. The trade became important, spreading from the Levant to the outer regions of Gaul. At the beginning of the Christian era, silk was one of the most important and costly items which came from the East to Rome. It was in Rome that the silk exchange was set up. The raw silks were fabricated and made into garments by Roman slaves, and then trans-shipped throughout the tremendous Roman Empire at greatly increased costs. Because it was necessary to protect caravans of these precious stuffs from robbers, pirates, shipwrecks and storms, the dispersed Jews, who were

prolific traders in this commodity, instituted a primitive form of insurance and used bills of exchange (forerunner of our modern banking system) to carry on silk trading transactions. Thus it is understandable that silk, at the decline of the Roman Empire was, as Aurelian claims, "worth its weight in gold." The traffic was tremendous despite the fact that many thought it effeminate for men to wear silk, and despite its high price.

THE ORIGIN OF SILK GROWING IN JAPAN is described in the Japanese legend of the *Girl with the Golden Banner*. There was once a little princess whose stepmother hated her because of her beautiful golden hair, and had her buried alive. But the good spirits delivered the child from her prison and carried her away to the coast of Japan. The princess had scarcely set foot on the sacred soil when she was transformed into a silkworm. In this legend the different stages of the metamorphosis of the silkworm are plainly recognizable. The golden hair makes it probable that the legend was of Indian origin, for the cocoons of India are yellow in color, whereas those of China are white. The short yellow threads which hang from the empty cocoons may have created the legend of the golden-haired princess.

When the seat of the Roman Empire was moved to Constantinople, the Emperor Justinian monopolized the trade for himself and also sought to divert the trade from the Persian route (over which raw silk was then imported from the East and into Europe) through Abyssinia. He was not successful; but two Persian monks who had lived a long time in China acted as his spies and smuggled in silk worm eggs and mulberry seeds in a hollow bamboo cane. In this memorable year, A.D. 550, all varieties of silk worms which stocked and supplied the Western world for more than 1400 years were generated. The silken textures of Byzantium became world-famous. The spread of the demand for silk was in part propagated by early prelates of the Christian Church whose vestments and altar cloths were made of priceless silks. The feudal lords envied the luxury displayed by the early Churchmen; soon they adopted silk for themselves, their ladies and their courts. In the many wars during the next few hundred years, silken booty was diverted into every part of the Western world. Men-at-arms brought home bits of silk as treasures for their mothers and wives. Silk was a treasure coveted all over Europe.

Development of Manufacture in the West

The conquering Saracens next gained mastery over the silk trade and, with sword and jehad, spread the knowledge of sericulture through both East and West. The peculiar nature of their art culture created a school of patterns and colors which were quite different from anything seen up to that time. By the Twelfth Century the Saracens had established silk mills in Asia Minor and as far west as Sicily. The excellence of their products is verified in the written testimony of Ordericus Vitalis who writes, "A Bishop of France brought with him from Southern Italy (Sicily) several large pieces of silk, out of the finest of which four copes were made for the cathedral chanters."

In this period of history, most of the great wealth of Europe lay in the hands of the nobles and the Church. Since the cultivation and manufacture of silk was a profitable business, these lords encouraged the making of silk in such towns as Florence, Milan, Genoa and Venice, which have given their names to

(please turn page)





fig. 5.

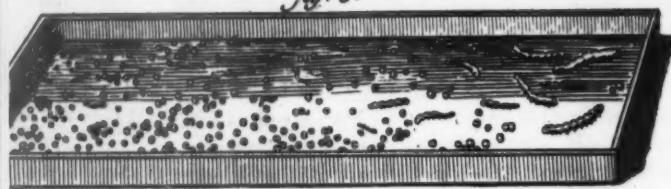


fig. 6.

fig. 8.

fig. 9.



fig. 10.



fig. 11.

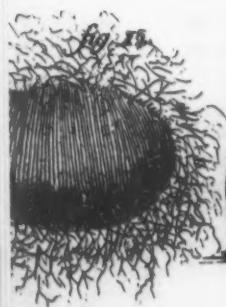


fig. 12.

fig. 13.

fig. 14.

fig. 15.

fig. 16.



fig. 17.



fig. 18.

Key to illustrations

- 1-5. Preparing mulberry leaves for feeding (see corresponding illustrations on opposite page)
6. Silkworms emerging from eggs
- 7, 8, 9. Silkworms in feeding stages
- 10-13. Silkworm spins itself into the cocoon
14. Silkworm emerging from the pierced cocoon
- 15, 16. The dried cocoon
- 17, 18. Silk moths ready for mating . . . and the beginning of the cycle again

Silk . . . Shaper of Destinies (continued)

silken products ever since.

Just twelve years before Columbus discovered America, Louis XI started the first silk mill at Tours. Columbus set out, not to discover the new world, but to find a new route to the East whereby trading in silks could be made easier. It is not a matter of record that one of the reasons for the voyage to America was to obtain more and better silks for the European market. In the Seventeenth Century Colbert, a wise Frenchman, stimulated the silk industry in France by offering premiums for the planting of mulberry trees.

In the meantime, England did not lag far behind the continent countries in silk manufacture. Although silk-making was

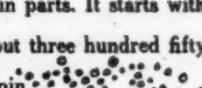
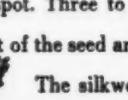
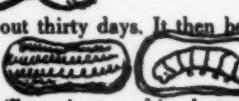
(please turn)



Women picking leaves from mulberry trees to feed the silkworms.

THE STAGES in the LIFE CYCLE of the SILKWORM . . .

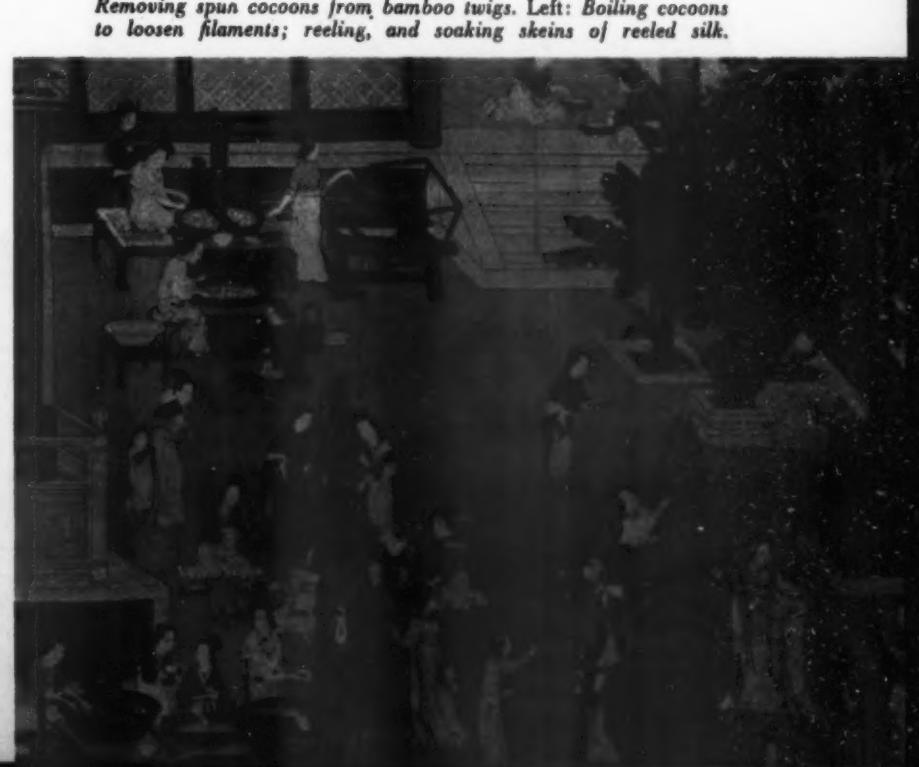
The process by which the silkworm makes silk has been a never-ending source of fascination to men of many races and civilizations. Early in the Fourth Century, it was one of the Church Fathers; John Chrysostomos, patriarch of Constantinople, who explained to Europe the secret of silk cultivation. In a famous sermon he discoursed in great detail on the development of the silkworm. And this he did, we learn, not out of zoological or economic interest, but because the transformation of the silkworm seemed to him the perfect analogy to the eternal transformations of the human soul.

The process itself may be divided into six main parts. It starts with the silk moth  who deposits about three hundred fifty eggs or seeds, each about the size of the head of a pin.  Each egg has a small spot on one end and when hatched the worm gnaws a hole through this spot. Three to seven days later the worm hatches  out of the seed and begins to feed on tender mulberry leaves.  The silkworm next passes through five stages, taking about thirty days. It then begins to spin itself into the precious cocoon.  It spins at the rate of almost a foot of silk a minute and in about three days completes the cocoon. The next step is the emerging of the silk moth from the precious cocoon.

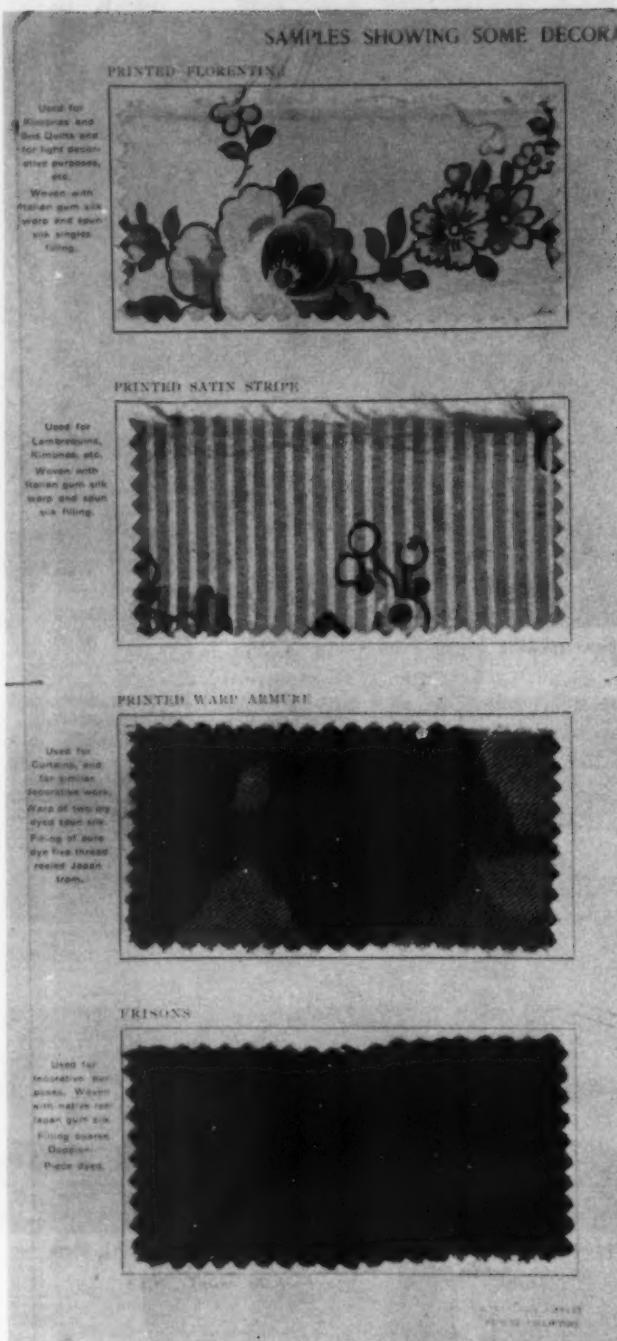
As soon as the fully grown silk moth has mated and laid a new generation of eggs, it dies . . . and the cycle of egg-to-chrysalide-to-moth continues all over again.



Removing the hatched silkworms from trays, and placing them on feeding racks with mulberry branches.



Removing spun cocoons from bamboo twigs. Left: Boiling cocoons to loosen filaments; reeling, and soaking skeins of reeled silk.



Types of fabrics woven in America in the Nineteenth Century by Cheney Bros. The Cheney Silk Co., founded in 1838, was one of the great silk families.

Silk . . . Shaper of Destinies (continued)

introduced in the British Isles during the reign of Henry VI, the war between Holland and Spain gave the first real impetus to British silk-making when a large body of expert Flemish weavers emigrated from the Low Countries. The revocation of the Edict of Nantes 100 years later sent a large group of the most skilled silk workers from France to England. The bulk of these French workers settled at Spitalfields and set up a guild of silk workers in 1629. James I used all possible inducements to encourage the growth of the industry.

IN 1700 THE ENGLISH SILK WEAVERS laid a petition before both Houses of Parliament, in which they showed in detail that the duty imposed on imported silk was inadequate and was to blame for the fact that French silk was to be had in England at a price lower than that asked for English silk. The English weavers were at pains to stress the importance of their industry and stated that their production was twenty times as large as in 1664. They quoted the manufacture of black silk for caps and shawls which had been unknown in England 25 years previously and now yielded 300,000 pounds yearly. The silk weavers also stated that the exports of woolen materials had increased, and that in exchange for these goods raw silk and semi-finished silks were imported, thus ensuring increase of work for English manufacturers.

Silk manufacture in England was at the mercy of the continent countries where most of the thrown silks were obtained. In 1718, one Lombe of Derby entered Italy disguised as a laborer. He smuggled out drawings of the machinery used for silk throwing and was then subsidized by the English government to build a plant on the banks of the Derwent. The Irish, too, came in for their share of sericulture when in 1825 the British, Irish and Colonial silk companies, with a capital of a million pounds, tried to introduce silk growing into Ireland, but this was a failure. Vying for leadership, the Spaniards under Cortez tried to introduce sericulture into Mexico; in 1522 the writer Acosta mentions the fact that the first mulberry trees were planted and eggs were brought from Spain. It was not long before this industry died out in Mexico.

Attempts at Sericulture in America

In 1609 King James, straining every effort to make England a world silk leader, tried to introduce the silk worm into the British segment of the New World. Due to a shipwreck, his first venture was a failure. In 1619, an all-out effort was again made in Virginia to encourage sericulture. The industry was bolstered by means of bounties and rewards, and laws were passed to stimulate its development. When the Revolutionary War broke out, Benjamin Franklin was at work trying to establish a silk filature at Philadelphia. After the Colonies won their inde-

MODERN SILK TECHNOLOGY IN OPERATION: FINISHING A SECTION ON SILK SYSTEM WARPING



pendence, Connecticut tried by means of the bounty system to encourage home silk raising. In fact, practically every state in the Union tried such a measure until as late as 1872.

A state of frenzy in silk production took place in 1838. The South Sea Islands' mulberry tree was claimed by Samuel Whitmarsh to be ideal for feeding silk worms. Plants, crops, trees and houses were razed to make room for mulberry plantations. Mulberry plants were sold two and three times over, at an advance in prices for every sale, the buyers never seeing the actual shrub itself. Seedlings of a year's growth were sold at the almost unheard of price of one dollar each, and as much as \$3,300,000 changed hands for these plants in one week in Philadelphia. But the speculation collapsed in 1839 when the South Sea Island mulberry tree . . . the moris multicaulis . . . was found to be unfit for silk worm rearing. The financial ruin that attended this collapse effected a tremendous pressure on many American economies.

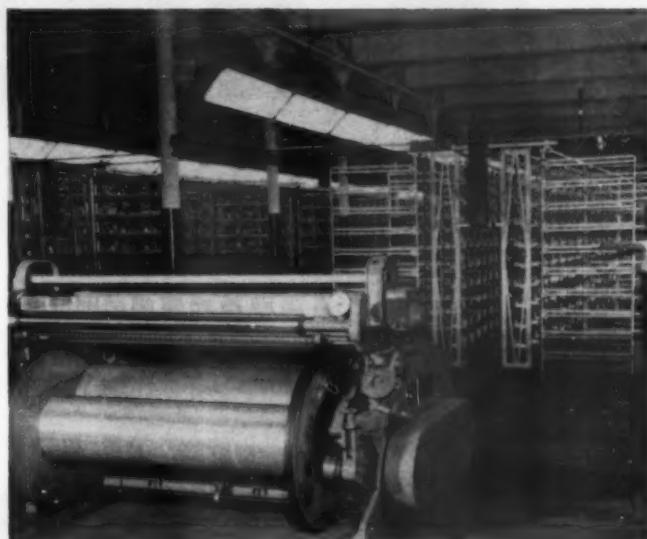
From the close of the Civil War onward, Japan dominated the silk market. China, Bengal, Piedmont and the Levant became the principal producing centers next in order.

Where labor is cheap and abundant, silk can be produced and profitably marketed. The rising standard of living the world over threatens to make this an obsolete culture unless scientific minds investigate the mechanical propagation of the silk worm and replace human labor with the work of the machine.



The thread of silk's history has coursed through century after century, through country after country, through wars and peace and drought, through changing civilizations, changing ideologies, changing technologies . . . and has left the world richer, more colorful, more emotionally fruitful.

Few are the commodities which man can point to as having contributed to his cultural development as has silk. It has enjoyed a glowing past; it has served to adorn man, to clothe man, to enrich his sense of beauty . . . but it has also served him through a place in vital industry. The future of such a fiber must be indeed endowed with the aura of its past.



Photographed by Ben Schnall, courtesy of Wm. Skinner & Sons

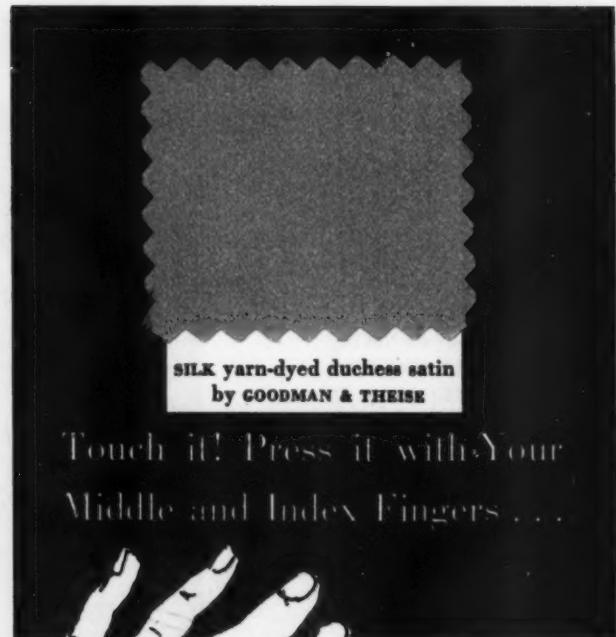
LOOKING THROUGH SECTION BEAMS TOWARD SLASHER.



HAN



The Crunchy Feel or Hand of Silk is U



Touch it! Press it with Your
Middle and Index Fingers . . .



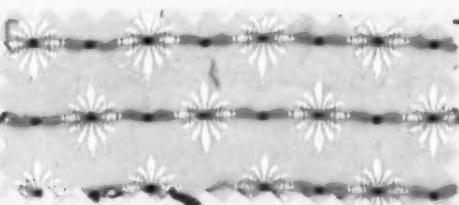
is Unmistakable . . .



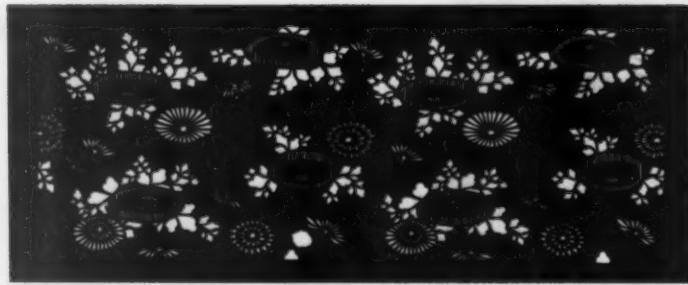
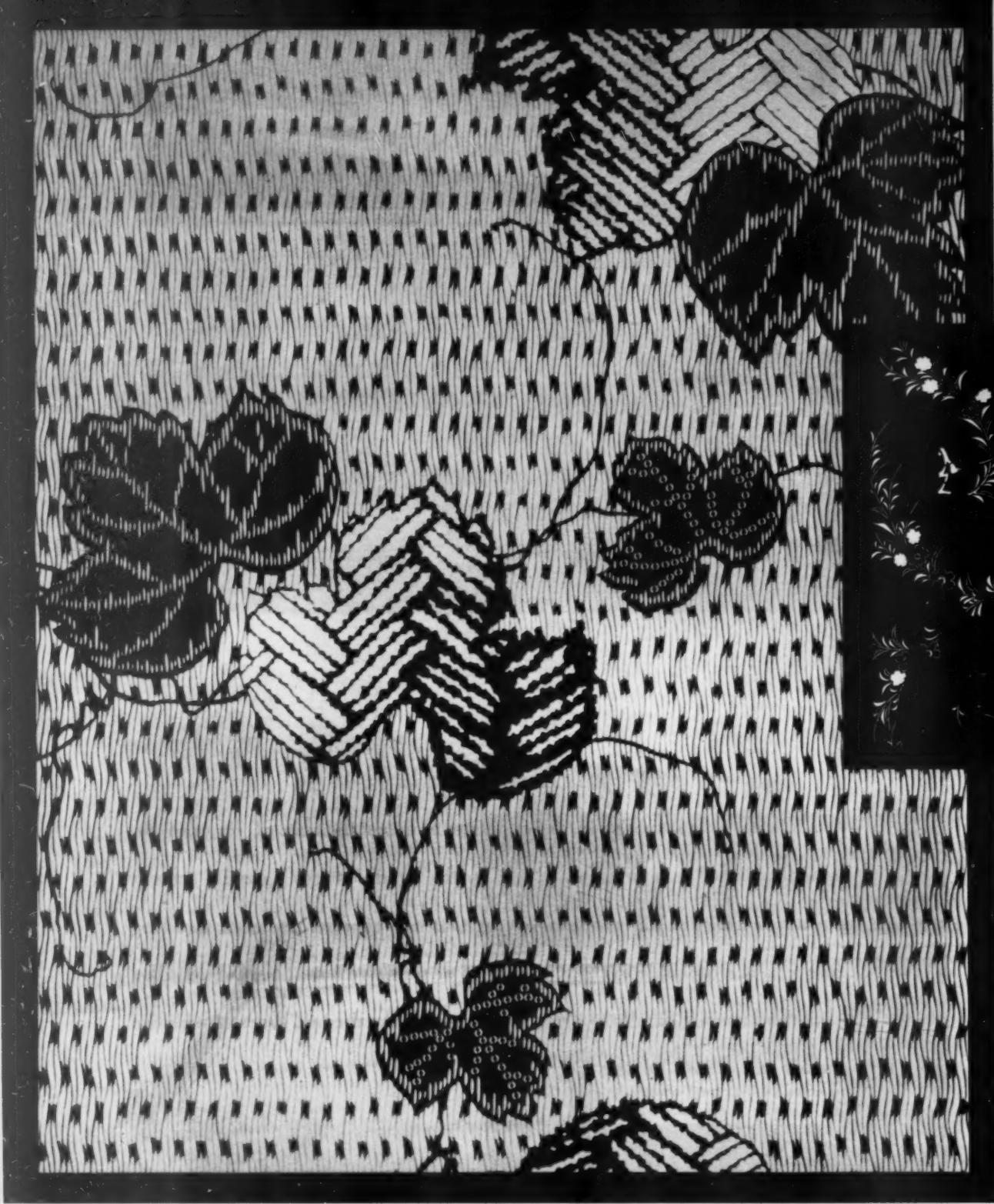
Just as it is possible for some sensitive palates to detect the taste of, for example, an orange as distinguished from a kumquat . . . so the hand conveys a special sensory message when it touches silk. The crunchy feeling that one experiences when touching a pure silk fabric is unmistakable to the experienced or sensitive hand. Yarn-dyed silks, especially, have this crunchy handle to a marked degree. Make the test yourself with the silk fabrics which are shown on this page.



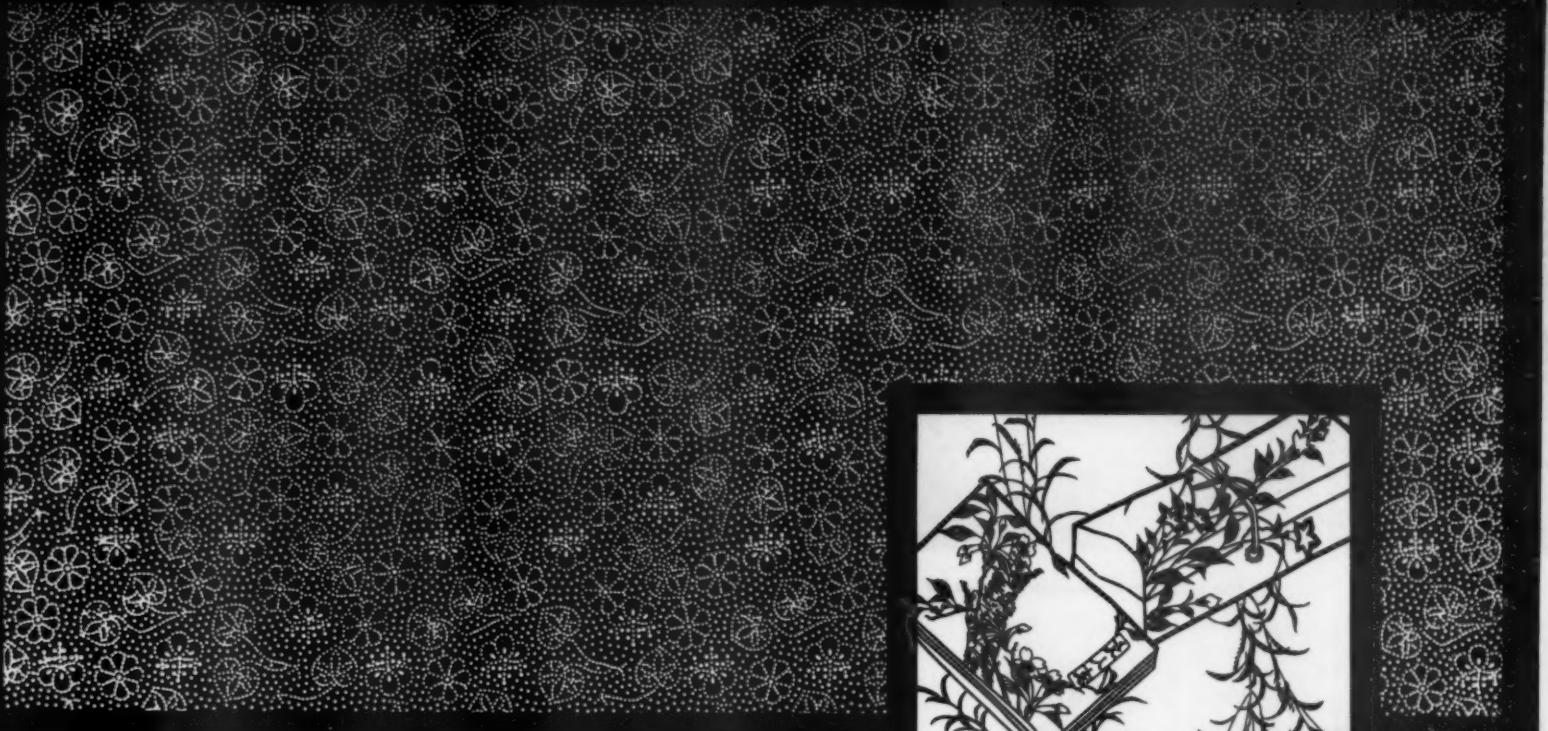
SILK plaid Jacquard taffeta by ONONDAGA



SILK figured Jacquard by COHAMA



The screens were meticulously cut and are distinguished by the ingenuity which went into their making. No design was too intricate for the Japanese silk screen makers whose work has survived almost three centuries of use.

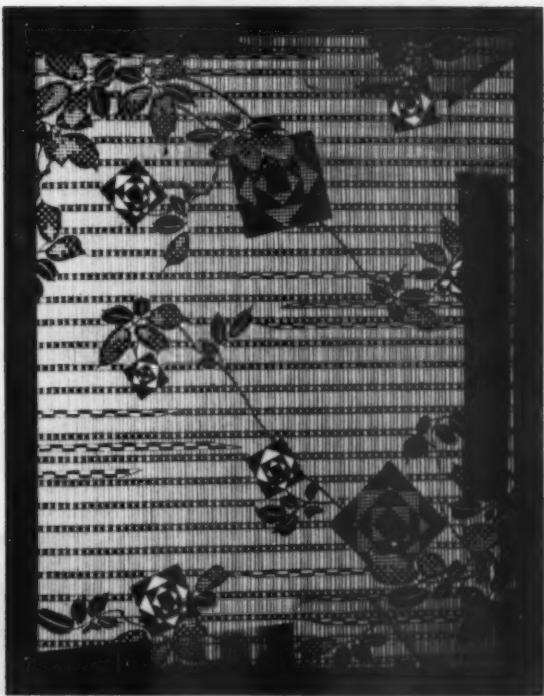


MODERN SCREEN PRINTING DATES BACK TO JAPAN'S SILK SCREENS

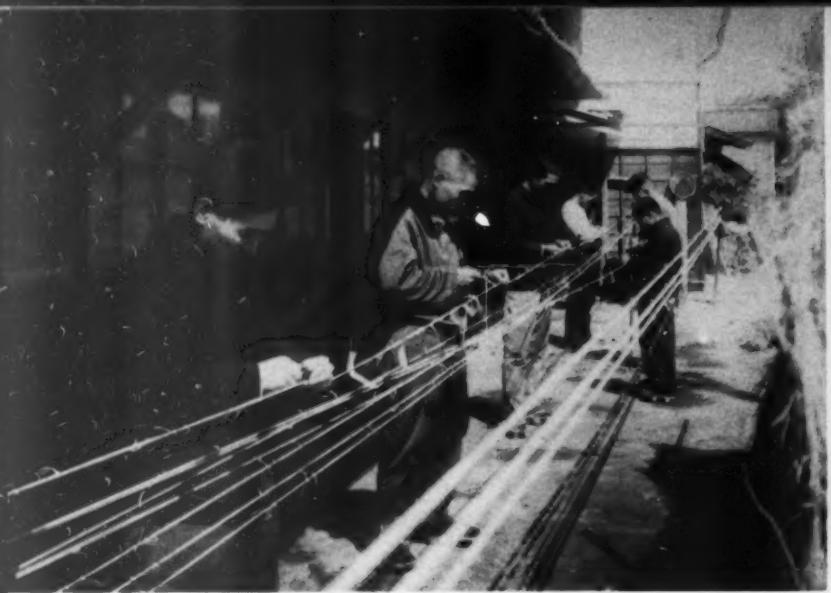
Although refinements have been added in the cutting of, as well as in the printing from, screens, the process developed by a Shinto priest named Yuzen who dwelt in Kyoto in the 17th Century is apparently the forerunner of modern screen printing.

Yuzen, it is recorded, used a special paper made from the bark of the mulberry tree for his printing cuts. It possessed properties which held and protected the infinitesimal detail and fine lines typical of Japanese silk screen patterns. To hold them together, human hair was used as a backing.

Multicolor effects as well as monotypes were achieved through this process; and among examples of the art are some of the most intricate designs and complex workmanship produced by man. Noteworthy, too, is the agelessness of the patterns executed at that time; although they date back several centuries, they are as modern today as when they were created. It is interesting particularly to observe the simplicity of expression which accompanies the lively motifs.



These are part of a group owned by Mr. and Mrs. Harry Froehlich of Los Angeles, which formed one of the most extensive European collections of old Japanese silkscreen cuts.



The warps are hand-tied at regular intervals . . .



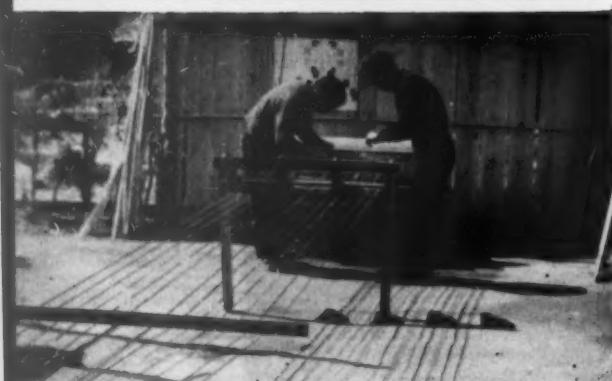
and then carefully spot-dyed by a colorist from movable dye basins

Japanese workman shown arranging the warps

THE MEISEN METHOD . . .

AN EXAMPLE OF TEXTILE INGENUITY

In their search for a unique woven silk, Cohama has been working with Japanese experts on the Meisen method to achieve otherwise unobtainable effects in fabrics. The combination of American enterprise and Japanese patience has produced fabric that is a triumph of textile ingenuity. One of the many examples of this Meisen method of spot-dyeing of the warp is shown below. The photographs present an interesting picture of the method.



The warps are entered with reeds after tying and spot-dyeing



This is an actual swatch of the silk fabric based upon a centuries-old technique which, through Cohama's resourcefulness, has been made available to the American market.

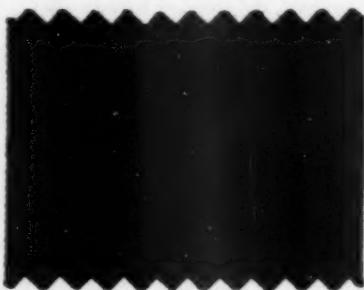
Process of hand-dyeing warps is shown below



The fabric is woven on a small hand loom

Silk

Especially written for AMERICAN FABRICS by Edith A. Standen, whose duties as Assistant Curator in charge of the Textile Study Room at the Metropolitan Museum of Art bring her in daily touch with many of the examples of silk weaving and their histories.



SILK ribbon by MARTIN FABRICS

AS SOFT AS SILK means as soft as anything can be. And softness to our ancestors meant riches, meant luxury, meant a life far removed from the rough lot of the common people. Silk, indeed, until very lately, was as potent a symbol of riches and luxury as gold, and it is so used in the folklore of all countries; the knight's horse in the ballad may be *silver-shod before, With the beaten gold behind*, but it is the *broidered silken gown, with nine yards a-drooping and trailing on the ground* that wins the fair lady who has refused the keys of Canterbury, the little golden bell and even the pair of boots of cork.

Silk has always ranked with jewels and precious metals as a target for sumptuary laws, whether imposed for moral, social or economic reasons; an English decree of 1551, "No man under the degree of a gentleman to wear any silk points," shows that even such inconspicuous articles of dress as attachments of doublet and hose could not be of silk unless the wearer were worthy of such a noble fabric.

The sheen of silk harmonizes with the glitter of metals and the sparkle of precious stones, so that from very early times the gold wefts run parallel with the silken ones across the looms, and pearls and gems adorn the embroidery. All, of course, for the glory of those above "the degree of a gentleman," and generally very much above it. In fact, such a substance was most fittingly used in the service of God, and the earliest European silks were chiefly made into vestments and all the furnishings of church and altar, except the corporal, which must be the pure and humble linen of Christ's winding sheet.

Bodies and bones of saints, either when

originally interred or when solemnly *translated* [moved to another resting-place] were often wrapped in precious and far-fetched silks, sometimes from the East, a fact to which we owe most of our specimens of Dark Ages and very early Medieval fabrics. Buried for centuries, these silks have often been preserved in marvelous freshness. In fact, for all its delicacy, silk is a remarkably tough substance; though it can wear out or rot or be burned (as it often has been, for the sake of the golden threads woven with it), it cannot be broken like glass nor melted down, and it is not subject to much destruction by insects. One curious result of this is that some of the finest early silk vestments were preserved in the Protestant churches of North Germany; their Catholic counterparts slowly wore out through the centuries but, though men might climb dangerous ladders to smash the window that showed the Mother of God, the equally splendid copes and chasubles remained safe year after year in the dark chests and presses, until the time came when they could be seen as beautiful rather than as idolatrous.



SILK yarn-dyed shantung by SIMPLON

For many centuries, too, in Europe, silk was an object of awe and wonder as well as of admiration and expense. The mysterious processes by which the cocoon spun by an ugly worm could be transformed into this ravishing substance were not to be learned for the asking. The steps in the diffusion of silk from country to country are always about the same; first, woven silks are imported at great expense, sometimes to be unraveled and re-woven, as the Romans did, making transparent gauzes out of heavy Chinese stuffs; then raw silk is brought in and woven locally; finally

(please turn the page)



Red silk with a yellow design, Spanish or Portuguese, late 16th — early 17th century.

This fantastic, even garish, design is surely not the product of a sophisticated artist. An interesting point is the contrast between the conventional and heraldic presentation of the leopards and the lively, naturalistic renderings of the other beasts. The designer evidently could not conceive the noble leopard in any other guise than as he had seen it on a hundred armorial bearings; the dogs, boars and rabbits he looked at for himself.



Velvet weaving at its peak in Italy, about 1450-1500. The ground is gold, with the design in crimson pile of two heights; the coat-of-arms is brocaded. Much of the gold is bouclé.

The pattern is the fundamental Gothic one, the so-called pomegranate design, which is really more like an artichoke or thistle. Here it is adapted for the owner of the coat-of-arms shown, who, unfortunately, has not been identified. The leaves curl and twist with the vigor of young fern sprouts, just as they can be seen in stone on the carved capitals of medieval columns. The incongruous, modern edging, which makes the piece look like a table-mat, instead of, as it undoubtedly was, part of a noble garment for court or church, has been removed since this photograph was made.

Silk . . . Museum (continued)

silk worms are introduced (if the climate will support mulberry trees) and completely native silk goods are produced. The manufacture has always been so profitable that rulers have continually striven to encourage it and to prohibit the entry of foreign silks.

As in the case of porcelain, the history of silk-making is full of stories of smuggled goods, stolen secrets, and disgruntled workmen fleeing with their precious know-how from a jealous homeland to friendly and greedy strangers. There are the romantic stories too . . . the bride, already more loyal to her new home than to the land of her birth, who conceals the seeds and eggs in her head-dress; the plodding monks whose staves have secret carrying-places. Even when fully established, silk-making is a luxury business always, flourishing with the political fortunes of the state, withering when war, civil strife or loss of markets sap the strength of the community.

At the Metropolitan Museum of Art in

Satin with a blue ground and yellow pattern. Florentine 16th century.

The pomegranate (properly so-called) and the five-petaled rose are favorite motifs of the Middle Ages and the Renaissance. This piece shows all the tension and vitality of medieval pieces but the design has become poised and stable.



November the exhibition THE WORLD OF SILK will show how this most splendid of natural fabrics has been handled in the great silk centers of the world, century after century. All the material is drawn from the Museum's own collection, which, though it is always available to the public and students in the Textile Study Room, has never before been exhibited in such quantity. Even this display, of course, is but a small fraction of the Museum's holdings in this field. The examples which follow, most of which are in the exhibition, have been chosen because of some striking quality in the design or because they lend themselves to verbal comment. As in the case of other great works of art, the only appropriate words for many of these silks are *Look! Look!* They are not intended to give an impression of the show as a whole; this could not be done by so small a selection, even if it included the Chinese, Japanese, Indian, Persian and Turkish fabrics, which have not been considered in this group.



Green damask, Italian work, early 16th century.

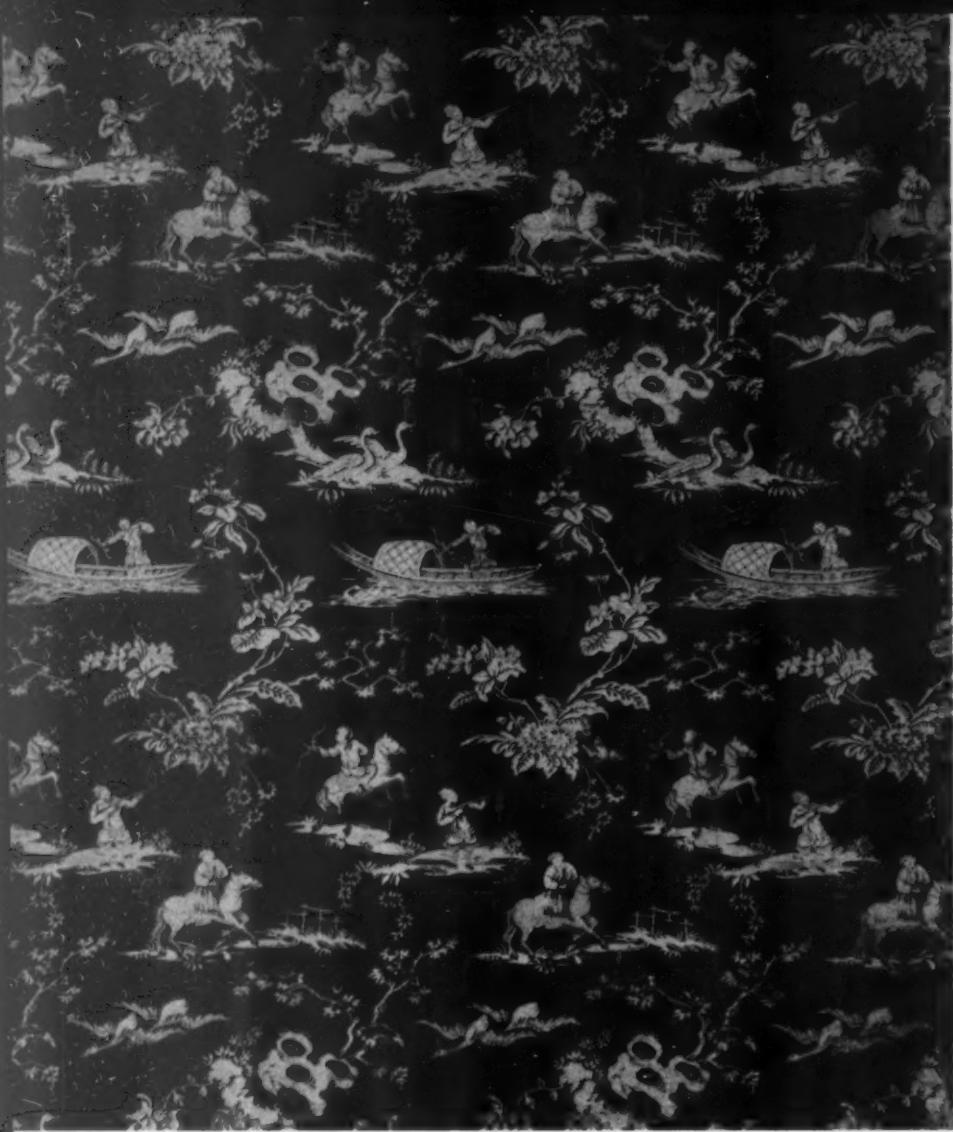
Prominent in the design are a diamond ring, one of the emblems of the Medici family of Florence, and three pears, the coat-of-arms of the Peruzzi of the same city. These show that the fabric was woven for someone connected with both families and it is very probable that it was made for the wedding of Verano Peruzzi and Laudomia de' Medici early in the 16th century. A lady wearing a dress with this pattern is shown in a portrait in the Uffizi Gallery, Florence, attributed to Pontormo.



Blue satin with yellow design. Macao, 16th century.

The Portuguese made a settlement at Macao on the Chinese coast in 1577, built churches and hospitals and established a city. Here Chinese craftsmen wove silks to their orders. Nothing of Portugal is here except the double-headed eagle of its coat-of-arms, and only a certain non-Chinese stiffness of the design suggests Europe.

(please turn the page)



Brocaded satin with green ground and design in pastel shades and white. Venetian, about 1750.

China in Europe, rather than Europe in China. Time and again, European weavers have been fascinated by the exotic fabrics of the East and have adapted them to their own looms. To the 18th century, serenely conscious of its own enlightenment, the oriental figures were cute and amusing; the Chinese influence had no pervasive effect on textiles as a whole, but resulted in *jeux d'esprit* like this silk.



Satin with a pink ground, the design in white. Lyon, end of 18th century.

The men who made the French Revolution consciously modeled their conduct on ancient Greece and Rome, and imitations of classical models appeared in every kind of art. The motifs in this piece are antique, but they are interpreted in such a way that the result is more fantastic than classical. The swans near the base hold ribbons with the letters M P C, which stand for Manufacture Pernon et Cie., and an old label gives the title of the composition as *The Altar*; it was designed by Jean Démosthène Dugourc.

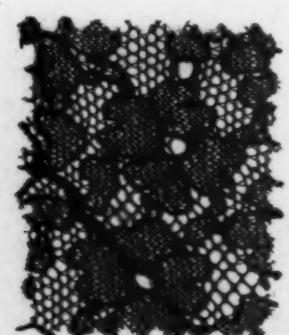


Brocaded satin with gray ground, the design in yellow, white, pink, blue and black, with much metal thread. Venetian, early 18th century.

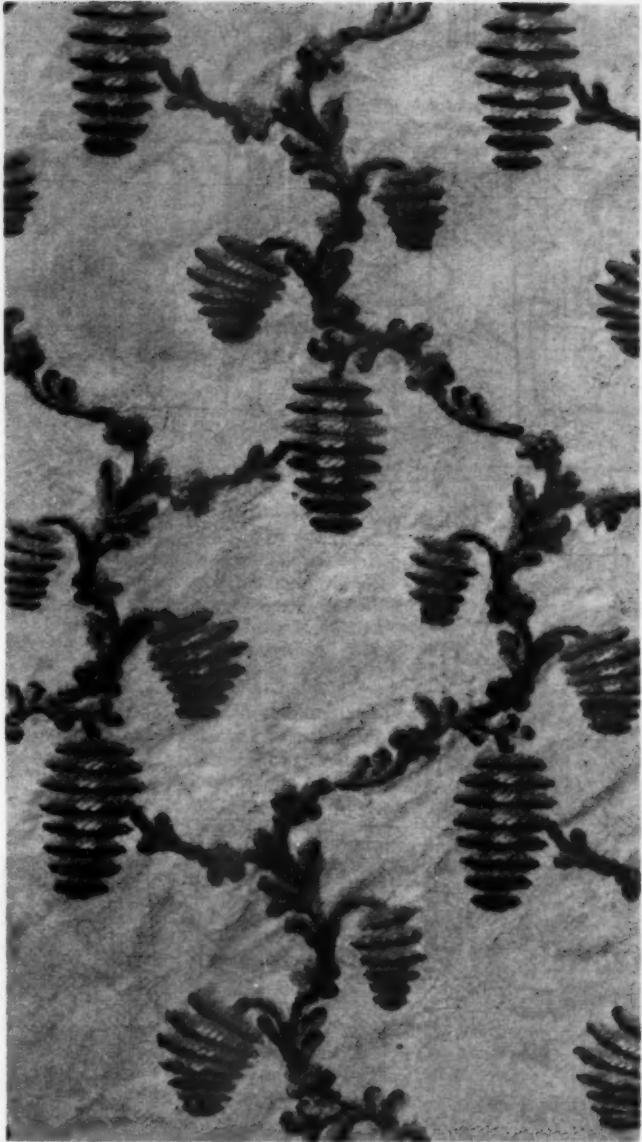
This was undoubtedly a special fabric woven for a special place, almost certainly a theatre. It shows two stage scenes; in one Punchinello and Harlequin dance in front of the footlights to the music of a small orchestra; in the other, the villain sinks through a trap-door, the heroine exulting beside him, while above appears the god from the machine, a charioted deity enthroned majestically in the clouds.



SILK print by GARVIN

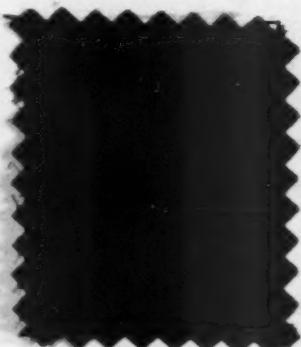


SILK lace by LIBERTY LACES



Brocaded satin with cream-colored ground and design in light pink, maroon, green and blue. French, 1750-1760.

A representation of Japanese lanterns seems to have been the inspiration for this quaint design. It was made at the height of the asymmetrical period in French 18th century art, a fashion most alien to the capabilities of the loom. It can be seen in this piece how, though the repeat is small, the feeling of irregularity is preserved; the areas outlined by the twisting stems are lopsided and the lanterns are carefully not paired off.



SILK doupioni shantung
by COUTURE



SILK velvet by MARTIN FABRICS



*Satin with a gray-white ground and a bright brocaded design.
Portuguese, 17th century.*

Somewhat removed from the main centers of European art movements, the artists of Portugal have often expressed themselves in exuberant, fantastic creations of their own invention. The use of animals as textile motifs, which became less common in Italy after 1450, continued to flourish in the Iberian peninsula. The mermaid holding the ends of her double tail in her hands is found all around the Mediterranean.

*Brocaded satin with a yellow ground, the ermine tails of the
design in black, white and brown, the flowers in blue and black.
French, 1725-1750.*

The use of fur as a textile motif is usually interpreted as a delicate compliment to the Polish wife of Louis XV, Marie Leszczynska; it is probably the only trace of this unfortunate woman to be seen in the decorative arts of France, which were so powerfully influenced by her rival, Mme. de Pompadour.



"A yarn well-thrown is



Bales containing *books*, or bundles of raw silk in individual skeins, are opened and inspected.

The raw silk is spot-checked for moisture and gum content, cleanliness, size or denier, and evenness of elasticity. For the important denier test, the silk on bobbins runs through the testing machine (right).



The throwing operations here highlighted are characteristic of silk used for hosiery knitting, tricot and circular knitting, braiding, lace weaving, thread manufacture, etc. The photographs and data were gathered at the throwing plant of Martin Fabrics Corporation, Bethlehem, Pennsylvania.

Before soaking, the individual skeins of silk are re-tied into bunches and wrapped in cheese cloth to prevent tangling and chafing during processing.

The bundles of silk are left soaking in a solution of soap, oil, water, and carbonate alkalis, heated to 85-110°F for 6 to 14 hours.

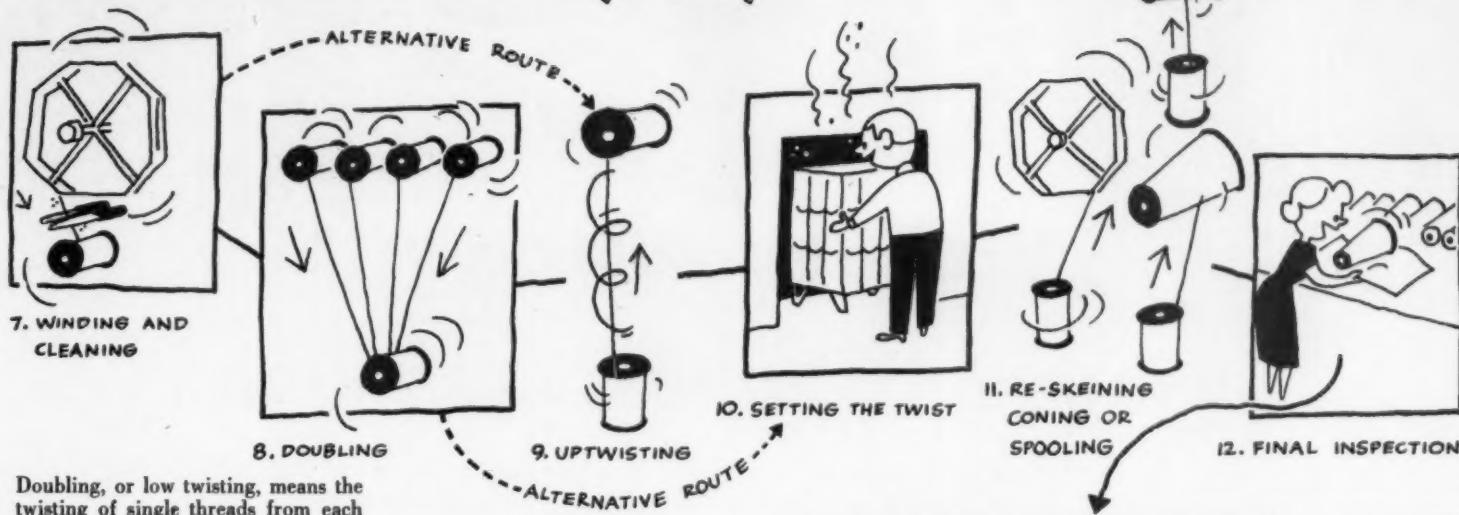


A centrifugal force extractor whirls the excess soaking solution out of the silk (step 5, above). After extraction, the silk will contain about 75% moisture.

The bundles of silk, taken from the extracting machine, are again separated into individual skeins, hung up on horizontal poles, and passed through an oven where they dry by circulating warm air.

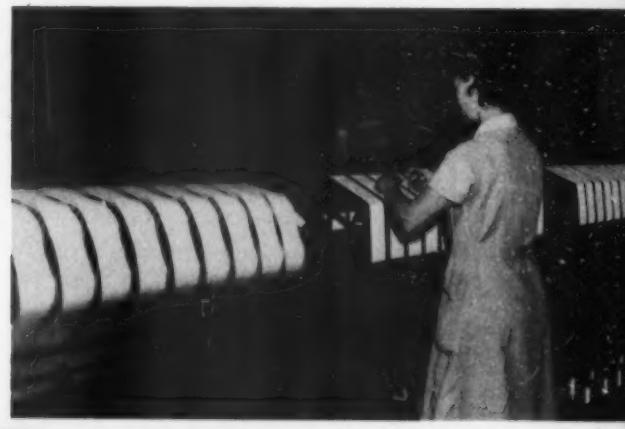


"half-woven" they say



Doubling, or low twisting, means the twisting of single threads from each of two or more bobbins into a single thread of two or more strands. Threads fed from bobbins on vertically aligned creel pins go downward through machine and are twisted into one thread wound on to a single bobbin. This *down twist* or *low twist*, of ten turns at the most, greatly strengthens the yarn. "S" twist means twisted to the right; "Z" twist, to the left.

Right. Uptwisting, or high twisting, runs the threads of the previously low-twisted silk from bobbins on vertical spindles at bottom of the machine *upward*, on to horizontal bobbins above. Additional twisting, as many as 75 turns per inch for crepe fabrics, gives the thread a high twist.



The skeins of silk, placed on *swifts* (octagonal-shaped wheels on the winding machines) are now wound on to small bobbins. During this operation the thread, passing through cleaning blades with micrometer-adjusted openings, is further cleaned of slubs and waste matter.

Bobbins containing the *high twist* thread go into a conditioning oven, with controlled moisture and temperature, adjustable for different yarns. Here the twist is *set* to prevent it from snarling during subsequent operations. The high twist is dormant until the fabric is *boiled off* prior to dyeing, when the twist becomes active, causing a shrinkage (*creping*) of the yarn and producing the pebble effect in woven fabrics and the dull appearance in silk crepe hosiery.

For yarn-dyed silk, the high twist *set* silk is reeled from the bobbins on to *flys* collecting the threads into skeins again, for easy dyeing. For piece-dyed silk, the thread is run upward on to either spools or cones. Broken threads occurring during coning are tied with a special slip-proof knot and placed on top of the cone, where they will not catch or snag the yarn as it is drawn off in subsequent operations.

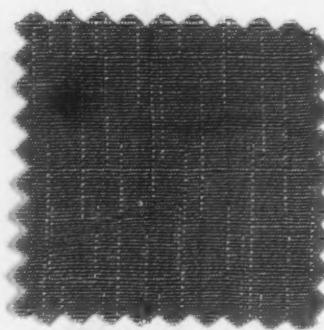
Cones of silk are rigidly inspected for shape, cleanliness, number of knots, and evidences of too-loose winding that causes a shiny *slack ring* to show at the top of the cone. After inspection, they are wrapped, labeled by lot, packaged, and shipped ready for weaving.



FINISHED YARN



Take out the sample of tussah fiber in this envelope and note its springiness and strength.



The addition of tussah imparts body and strength to this superb Honan-type silk suiting.

Swatch courtesy American Silk Mills

WHAT GIVES TUSSAH SILK ITS CHARACTER?

The unpampered tussah silkworm posed a question for many centuries which science has tracked down to a difference in diet

FEEL A PIECE OF CLOTH woven of silk yarn which came from the Japanese or Chinese silkworm and, despite its rich crunch, there remains with your sensitive fingers the memory of a yielding softness. Now pick up a piece of tussah silk, and at once your tactile sense telegraphs a message denoting a wiriness and resiliency akin to that of a fine worsted cloth.

Despite all of the legendary tales which purport to relate where and when the art of silkworm raising and silk weaving came into man's ken, or how the worms and the science of raising and processing them traveled to different parts of the globe . . . the simple fact is that silk's origin is buried somewhere in antiquity. However, it is known that among the variations in the types of silk fiber which are spun in cocoons in different countries, tussah . . . or *wild silk*, as it has been sometimes called . . . has come to be one of the most distinctive as well as essential for specific purposes.

For this reason it is important to know why tussah is different, and how it comes about that generally similar worms spin such completely different types of fiber. As in the case in a number of puzzling instances, nature's flair for adapting life to local conditions . . . or for providing suitable conditions to maintain life under changing circumstances . . . is the key.

Why Tussah is Different

In essence, the difference between Japanese silk and tussah silk is this: the Japanese silkworm lives a coddled and artificial life; it is cultivated, nurtured, and fed especially for the purpose of securing from it a fine textured fiber. On the other hand, the moth which produces the fiber which makes up tussah is a rugged individualist; it grows wild, under harder weather conditions, and instead of feeding on carefully tended mulberry leaves it feeds on the leaf of the oak tree.

Just as you would expect the child of delicately reared parents to be refined and delicate, so would you expect the offspring of pioneer folk to be hardy and robust. The Japanese or Chinese silkworm is virtually a hand-fed producer, and so it spins a fiber of incredibly fine and soft texture. But the worm which lives in the virginal forests of Asia learns to defend and to fend for itself, and turns to the oak tree as its habitat and feeding ground. From this source comes a fiber which is extruded not in cylindrical but in *ribbon* form, and from this difference in the form and strength of the extrusion comes the basis for tussah's astonishing springiness as well as its durability and relative hardness.

Please note the use of the word *relative*, for it should be

stressed that despite the difference in structure, tussah is by no means a roughneck in the world of textiles. It is as rightly entitled to wear the crown of aristocracy as its Japanese or Chinese cousins; it graces the bodies and the homes of the luxury lover just as suitably as either of them. But, because of its differences in chemical conception as well as in finished form, tussah generally is assigned harder tasks in the world of silk.

A Comparison with Steel Springs

To gain a clear understanding of tussah's greater resiliency, let us compare silk fiber with steel springs: If you have ever had cause to open the case of a watch, you will observe that it has two types of spring; one is a delicate little affair made of an extremely fine, cylindrical steel wire, while the mainspring is made of a steel ribbon. Both springs are made of the finest quality steel, yet the difference in springiness is enormous. In like manner, the Japanese silkworm extrudes an almost ethereally fine cylinder while its cousin extrudes a ribbon of tussah which has greater natural resilience as well as resistance.

So much for the reasons why tussah is different; now for a brief look into what these differences achieve for the silk weaver, the converter, the cutter, and the ultimate consumer:

Depending upon the end use in mind, tussah silk is blended in various degrees with Japanese or Chinese silk. What determines the percentage of tussah is either the desired surface effect or the desired strength factor . . . sometimes a combination of the two. To weave certain weights in ordinary silk would be prohibitive in cost as well as unfeasible to manipulate. Therefore, when a mill wishes to produce a heavier-than-usual silk cloth for suits, for draperies, for upholstery or similar purposes, it blends a goodly percentage of tussah with Japanese silk yarn, and the resultant cloth is one which has the required body without undue weight, can be delicately needled and draped, and in the end costs less than a comparable fabric woven entirely of Japanese silk.

In the hands of a skillful weaver, tussah takes on all the refinements and desirable qualities which are associated with silk. In the recent years since tussah has again become commercially obtainable, technologists have made great strides in refining the processes which translate the ribbon filament to a finished fabric. Through their patient research and the vision of the companies which employ them, the position of tussah in the field of fabrics-sure-to-succeed is assured.

COLOR AND THE MAN

By HOWARD KETCHAM

There will be larger wardrobes . . . and more selling . . . when men recover the courage of their taste in color, says AMERICAN FABRICS' consultant editor on color. Men are subject to herd instinct when they choose clothing; they are also subject to group loyalties involved in the old school tie, their clubs and military and fraternal associations. All of these loyalties present color associations. Capitalize on these loyalties and the color associations, and men's pre-19th century freedom may be revived.

• "Nowadays if men are more serious than women it's because their clothes are darker."

This perspicacious observation by France's gifted winner of the Nobel Prize for literature, André Gide, is a commentary on the sad fall which men's taste in costume color has taken during the past hundred years.

The curve in the appeal of bright colors in men's wear has shown a slight turn upward after a long swoop in the drab shadows of Victorian hues. A century ago, men still decked themselves in lavender or purple vestments; today, the nearest a man can come to it is a deep violet blue or a wine red.

There are certain exceptions . . . sports shirts, neckties, and even pajamas. But what has happened to the business shirts in salmon pink, heliotrope, and canary yellow that festooned haberdashery windows only a year ago?

A knowing authority on the art of appealing to women in advertising copy, the engaging Bj Kidd, contrasts the technique of selling to men and to women: Miss Salesgirl says to her woman customer: "Yes, ma'am, it's exclusive, there's not another like it in town." Mr. Salesman says to his man customer: "Yes, sir, it's our best seller; you'll see everyone wearing it."

Therein lies the key to restoration of man's courage to employ the colors that nature meant for his pleasure. The vast reservoir of color associations which men cherish as symbols of their schools, their fraternal organizations, and their military units can open the door to color in men's wear by combining group feeling and love of color.

Nature did not mean the drab role for men. It is evident in the animal kingdom, whose gaily bedecked males strut before dowdy mates.

Even the blue-green of the peacock's tail is of a shimmering brightness, with a 97 per cent reflection value which compares with the less than 60 per cent reflection of the brightest blue printing ink. Of course, it may be that the peacock has courage

to strut his colors before his hen because all others of his breed are as brightly caparisoned. Until the recent past, men had the same courage of group participation in wearing colorful apparel. It took modern civilization to slow down the human male, color-wise.

The purple shunned by men today was worn to denote the rank of Homer's Greek heroes when Troy fell, and appears earlier still in Biblical references to vestments for the priests and ornaments for the Tabernacle. Changing variations marked the use of purple in the Roman Empire, when 5000 molluscs were required to make a gram of purple dye. When the Pilgrims reached these shores, Elder Bradford wrote that "There's not a wealthy man among 'em — not a patch of purple."

Medieval Color Influences

The monastic orders in medieval times formed one of the more important group influences in styling apparel color. One such order robed itself in red cap, green or yellow coat, red trousers, scarlet leggings, and blue or green cloak. The uniformity of the colored attire made it acceptable to the individuals. Five centuries later, the red headpiece became the church symbol for the cardinal's rank.

Medieval peasantry in France was restricted to grey by edict of Charlemagne, and the modern peasant's smock of blue revives the quiet taste after centuries in which the French working classes wore yellow, green, brown and grey.

In ancient Ireland the rank of a family was revealed by the number of colors in their garments. Peasant apparel was in solid color, while the ancient Irish kings were garbed in seven-color outfits.

With the rise of feudalism, a code of color symbols spread across the fiefdoms of Europe, and the colors emblazoned on the knight's shield served as a source for his selection of apparel colors. Seven basic colors were employed:

| | |
|--------------------------|---------------------|
| Argent — silver or white | Or — gold or yellow |
| Azure — blue | Purpure — purple |
| Gules — red | Sable — black |

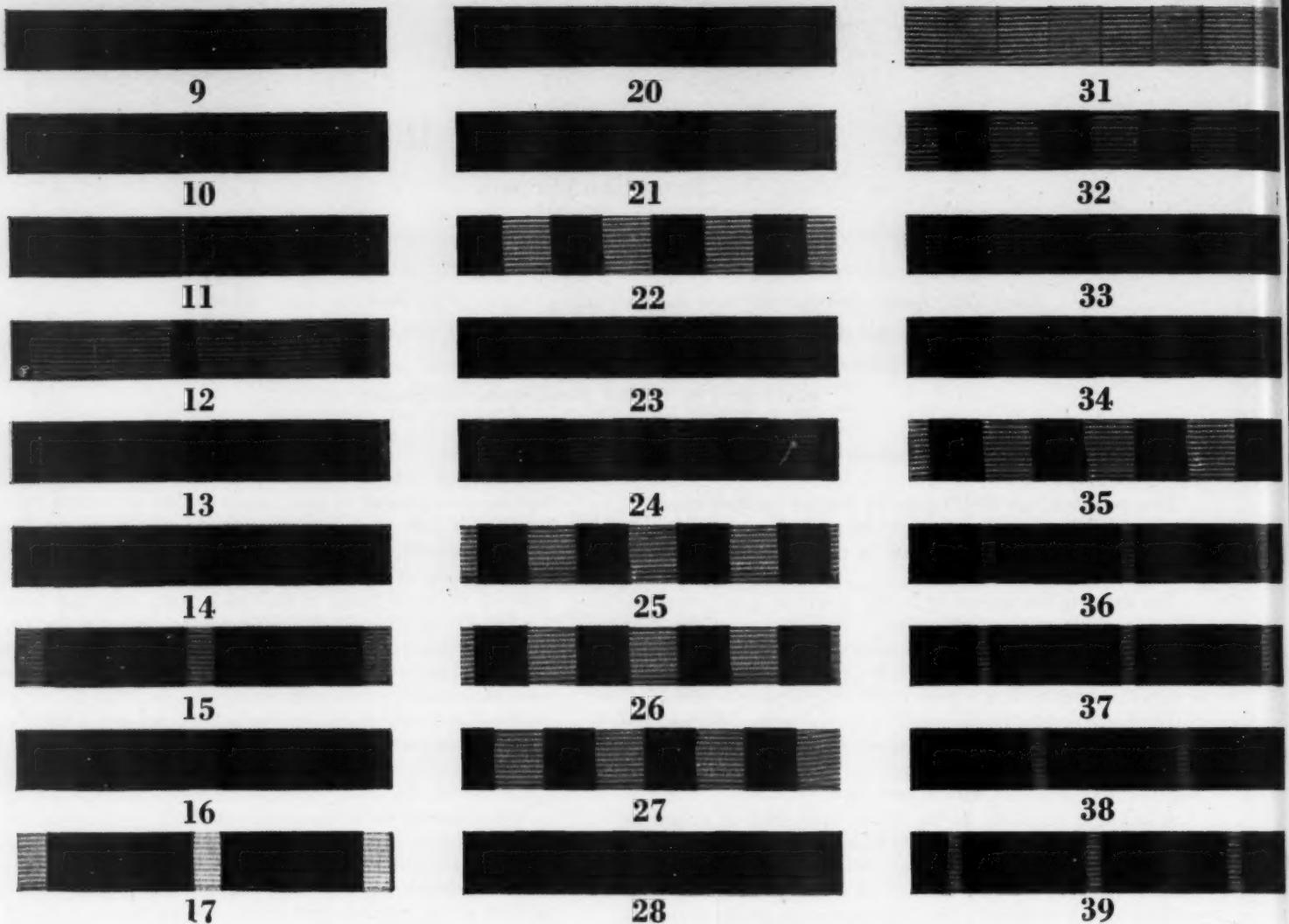
Vert — green

In addition, the shields bore such symbolic representations as ermine, with the fur of the ermine flecked by conventional black spots on a background of argent; metal, a combination of the gold and silver colors; the sea, represented by wavy bars of argent and azure; and vair, the heraldic representation of squirrel's fur in argent and azure, which was restricted to the use of certain classes of nobility and added a connotation of economy.

Color symbolism in the heraldic designs was intricate, with such special designations as *armed*, when an animal bore claws, horns or beak in a different color from the body; *attired*, when antlers of a stag differed from the body color; *barbed*, when a rose bore leaves of different color; *beaked*, when a non-predatory bird was pictured with beak in different color; *langued*, with tongue in different color; *membered*, with legs in different

Howard Ketcham has developed colors, design treatments, and illumination for store operators, fabrics, consumer products of all types, and transport carriers during the past twenty-four years. His original techniques in applying survey procedures to the determination of consumer preferences have established him as an authoritative voice on the question of what colors the public will buy, and how they can be sold. The range of his activity has included piece goods, blankets, upholstery fabrics, carpeting and flooring materials, plastics, construction materials and prefabricated homes, stores, showrooms and displays, in addition to his work in various transport fields.

(continued)



color; and *vane*, with vanes of different color. Many of these applications offer inspiration for designs for fabric today, even as they inspired the apparel of the entourage of noble families.

Rise of the Scottish Clan Colors

In the Scottish Highlands, descendants of the Celtic tribes whose excellent woven cloths in brilliant colors had excited the Romans, developed the color code of the tartan. The colors and patterns of that plaid woolen all-purpose garment . . . *a cloak by day and blanket by night* . . . were obtained in distinctive and soft effects through use of vegetable and moss dyes, and the Highlanders of old were skillful in maintaining the color patterns. Originally, there were about 40 clans whose use of an individual plaid pattern is justified by history, but as the clans increased in size the *cadets* . . . chiefs of the branches . . . added a line or two of color to the clan tartan to indicate the subdivisions. In later centuries, too, such clans as the Stewarts devised a special darker tartan with colors less conspicuous, for hunting.

Altogether, the Highlanders numbered less than 200,000 wearers of the clan tartan at the time of the ill-fated uprising of Culloden in 1745, after which a 37-year ban barred the

COLOR and MOOD

- RED . . . stimulating; increases working power
- YELLOW . . . stimulating; energizes brain
- GREEN . . . cooling; abates excitement
- WHITE . . . cheery in combination; cold alone
- BROWN . . . restful and warming; depressing alone
- PURPLE-MAUVE . . . soothing
- BLUE . . . calming; inspires confidence

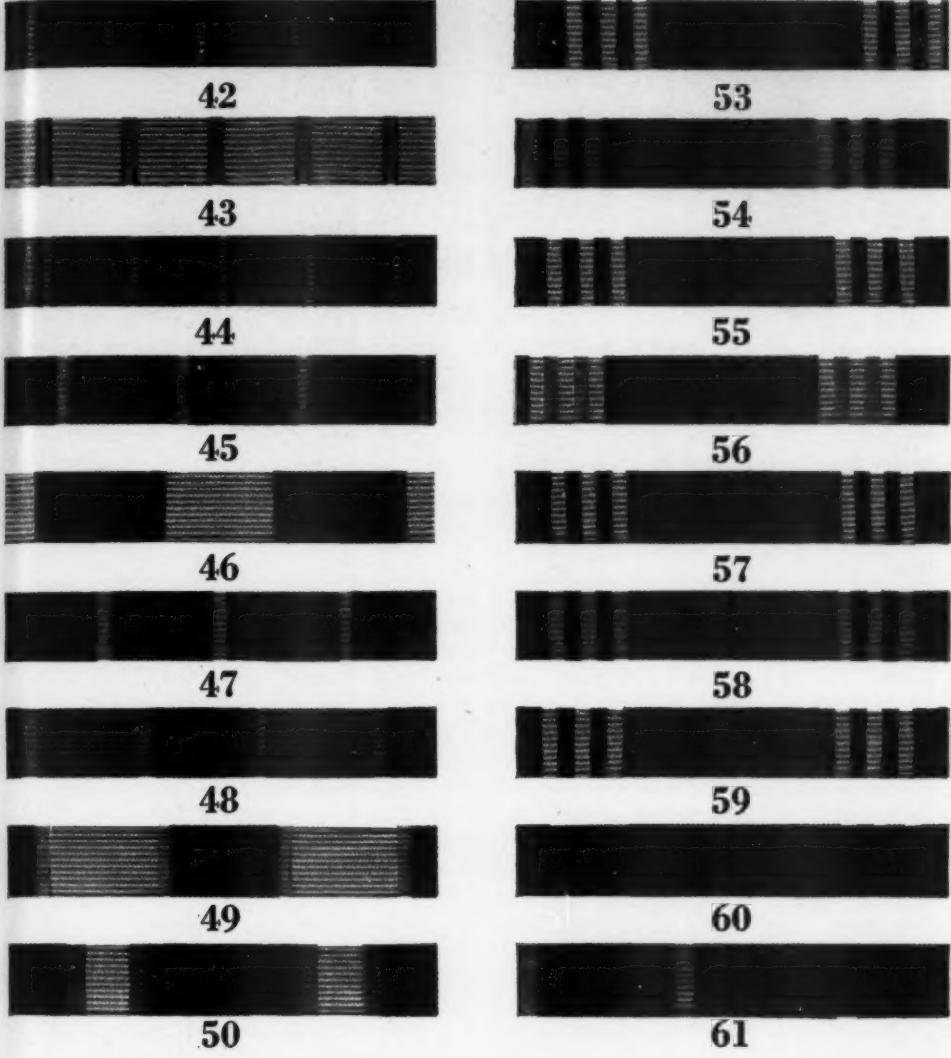
wearing of the emblematic garment. Today there is a rebirth of interest in this old symbol in fashion circles everywhere.

One of the outstanding pioneers in the use of color for the basic apparel of the American male, Ray Twyeffort . . . past president of the National Association of Merchant Tailors of America and sponsor in this country of the colored dinner jacket . . . has now come out with tartan-colored tuxedos. Both are fashions Capt. J. A. Murdock first spotted abroad. One tailor in Buffalo has sold twelve of them, and vast excitement was stirred when a Milwaukee financier wore a hunting Stewart tartan tuxedo to an investment bankers session, and a Pittsburgh convention was attended by a man in yellow and dark blue MacLeod plaid.

Changing Scenes Affect Colors

Even as the tartan colors set enduring associations and loyalties in the glens and valleys of the Scottish hills, and the color symbolism of feudal knighthood prevailed in the dress beyond moated castle walls, the Church established color-meanings in Britain and elsewhere in its domain.

At the same time, a growing availability of fabrics and dyes, combined with the new outlook fostered by the Crusades and the new bourgeoisie in the thriving cities, was reflected in added color in apparel. From the colorful floats and garments of the pageant-filled festivals, it was a short step to colorful clothes for the craftsmen in the new trade guilds and for the city fathers. Each town developed its color standards, and the loyalty of Parisians to the city's red and white is akin to the feeling of Americans for the symbol of the red, white and blue. There is one difference, however; in 14th-century Paris, the city fathers and guild-masters actually *wore* the colors, in vertical panels.



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COLOR AND THE MAN . . . continued

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HOW MANY OF THE Regimental and Divisional color combinations which are shown can you identify? For example: 13. First Division, 17. Armored Force, 20. Twenty-seventh Division, 23. Ninth Corps, 26. North Africa Theatre of Operations, 34. Adjutant General's Department, 44. Signal Corps, 45. Third Marine Division, 50. Military Air Transport Service, 58. Pacific Coastal Frontier Defense Sector, 61. Tank Destroyers, 25. First Service Command.

NINE COLORS ONLY are employed in the stripings alongside. This is a portion of a chart showing the colors of famous American Regiments and Divisions of World War II. The collection was compiled by Stern-Merritt Company, tie manufacturers, and Blue Bird Silk Mills, fabric manufacturers, for a neckwear promotion for men's stores.

Color took on political significance in the red and blue headgear worn by followers of Etienne Marcel in anti-nobility outbreaks. Servitors to the nobility wore the colors of the family emblem, and finally the family itself chose less conspicuous hues for apparel; the gaily-colored livery became symbolic of the serving classes.

In England, Lincoln green was popular long after Robin Hood, and the Pilgrims' progress across the ocean in the Mayflower was enlivened by the gay green and russet brown of their apparel. Elder William Brewster was pious in red cap, violet coat and green drawers.

In France, the high-heeled shoe was introduced to the world of fashion by short King Louis XIV, and *le roi soleil* wore his novel elevator footwear in red.

When King Charles II returned to England from France, he brought back the glory of color in men's attire, and this last stand of brilliance and luxury in men's dress endured until the French Revolution and the introduction of long trousers marked the end of colorful men's wear.

Colors and Men's Clubs

Through the centuries, however, associations of color and symbolism were forming the basis of a relationship of color to men's organizations. The cult of the *old school tie* is founded on the theme that *where men share loyalty they share color*.

Men's clubs had started in ancient Greece, with religious worship of the *hetaireia* . . . special sects which bowed to gods not of the state religion. In Rome there were Sodalities . . .

ZODIAC COLORS

| | |
|-------------------|-------------|
| RED . . . | Aries |
| SCARLET . . . | Taurus |
| YELLOW-RED . . . | Gemini |
| YELLOW . . . | Cancer, Leo |
| GREEN . . . | Libra |
| BLUE . . . | Sagittarius |
| PURPLE-BLUE . . . | Capricorn |
| PURPLE . . . | Aquarius |
| RED-VIOLET . . . | Pisces |

the clubs founded around the Roman baths . . . political associations, poor men's burial societies, and even trade associations. King Henry IV of England founded the first luncheon club, *Le Court de Bon Compagnie*, and Sir Walter Raleigh established the Bread Street Club at the Mermaid Tavern. A spate of coffee house clubs, literary clubs, political, social and diplomatic clubs — and gambling clubs as well — became woven into the British social scheme, and followed to the United States with the Sans Souci Club of Boston in 1785 and the Turtle Club of Hoboken in 1797.

Club colors developed in 1843, when the Zingari Cricket Club appeared on the field of sport dressed in gypsy black, red and gold. The Marylebone Cricket Club soon after adopted red and yellow. At Rugby, the players wore velvet caps with tinsel plates and silver tassels.

At the universities, clubs developed their own colors; at Oxford the Vincent's Club wore ties of dark blue and silver crowns, and at Cambridge the Hawks wore dark red with narrow gold stripes.

Among the other clubs, color emblems rose in many ways. When Mr. Norman Forbes entered the Garrick Club quarters, wearing a tie of pink and grey, fellow-members of the theatrical club jibed at him and were told, "This is the Garrick Club tie." And it came true. A famed officer of the Household Brigade was accosted, according to a popular old story, by a choleric old gentleman who demanded, "Are you aware, sir, that you are pirating the colors of the Upper Tooting Bicycle Club?"

The Old School Tie

The many great and old public schools of Great Britain, dating back as far as Winchester, founded in 1394, bear historic colors which are worn today. Neckwear can yet prove only the

(continued)

COLOR AND THE MAN . . . *continued*

starting point for color combinations which will apply to more basic garments for men.

The color loyalties of every college and high school graduate are wrapped around colors of the old school. I can readily attest to the feeling of staid business men for the colors of the *old school tie*; recently, in developing a color line for a manufacturer of marine paints, I found a more ready acceptance of the unique and original color line I had worked up, after the company president, a Princeton man, providentially found a *Nassau orange* among the different colors I proposed for his company.

An effective merchandising plan for a progressive manufacturer of men's wear would be to set up a line of color combinations embracing the most commonly used school colors, with instructions to the retailer to adopt promotional names tying in the colors at point-of-sale to the local high schools and nearby colleges.

Military Units Offer Color Stimulus

Military colors, too, offer a prospect for applying the group loyalties of men to color. Frederick the Great is credited with stimulating the pride of his Prussian armies through restoration of color to military trappings, and in the post-war period of American demobilization, a plan was seriously considered to bolster volunteer enlistments by establishing a uniform including blue-grey coat, silver blue buttons, royal blue trousers, and orange braid. Great was the outcry in Great Britain when the scarlet of the Home Guard was eliminated; greater was the rejoicing last year when the Brigade of Guards was permitted to restore the scarlet full-dress tunic for such public duty in London as the guarding of Buckingham Palace and, in fact, a declining rate of enlistments was checked.

Britain's colorful regimental units of guards, cavalry, infantry and artillery bear historic honors in the regimental colors which have been a popular source of inspiration for striped neckwear. The King's Hussars wear navy blue, gold and maroon; the Dragoon guards, black, ruby and grey; the Sea-

FOR BRIDAL CEREMONIES

| | | |
|-------------------|------------------|---|
| EGYPT: | Red | (to ward off evil spirits) |
| ROME: | Yellow | (worn by virgins of the temple of Vesta, goddess of the hearth) |
| ANCIENT HEBREW: | Blue border | (fidelity) |
| ANCIENT CHINA: | Yellow Green | (yellow wine bowl for bride; green for bridegroom) |
| MEDIEVAL ENGLAND: | Green, red, blue | |
| INDIA: | Yellow | |
| UNITED STATES: | White | (since 1818) |

forth Highlanders, navy, gold and ruby; the 11th Hussars, a distinctive red trouser commemorating a Napoleonic war triumph in Spain; the Black Watch, scarlet, green and blue, with scarlet feather to denote a notable triumph against Napoleon; the Royal Scots, oldest infantry unit in continuous military history, blue, tan and scarlet.

The colors of military units are strongly keyed to masculine taste for red and blue colors. Typical of these among American military regimental and divisional stripings and colors are the red, blue, grey and gold of the Air Forces, and the blue, red and grey of the Air Transport Command.

One of the factors that has weakened the appeal of military emblem colors in civilian applications is the tendency to distribute the colors in even-spaced stripings. As one of the outstanding hospital administrators phrased it, "the use of perfectly harmonious colors in a room would cause the patient to scream for a change of pace." Applying the same theme to the regularity of spacing of military colors in designs for civilian apparel, one might quote the poet Robert Herrick:

*A sweet disorder in the dress
Kindles in clothes a wantonness.*

It is a curious fact that a study of colors used in the world's 28,000 military decorations, orders and medals finds not more than 15 colors in use, in a total of 105 color combinations. Beyond that, the military mind has provided no alternative but copying and minor changes in color distribution.

Woman's Influence in Colors for Men

In the selection of men's apparel, the dominating influence may doubtless be summed up in one word . . . *women*. Estimates of the percentage of men who buy clothing under the supervision of their distaff consultant range from 35 to 60 per cent, with the figures for accessory purchases ranging as high as 85 per cent. Women who shop for men's apparel are torn between their own freedom of approach to color and an awareness of the inhibitions that shackle the male.

Place some facts on group color loyalty in the hands of the woman and you will have less difficulty enriching the colors of man's attire. And with greater freedom to use color, men will performe require larger wardrobes; certainly the brighter colors cannot be worn with the day-in day-out regularity of solemn blues, greys and browns.

It's largely a matter of education . . . for the man, and for the *little woman*. One of the nice stories of Abraham Lincoln's home life relates how the President complimented his wife on a new dress, commenting that the blue flowers in the dress design were the color of her eyes. Turning to her sister, Mary Todd Lincoln delightedly exclaimed:

"You see, Emilie, I am training my husband to see color. I do not think he knew pink from blue when I married him."

—HOWARD KETCHAM

COLOR ASSOCIATIONS

FOR MOURNING

| | |
|-------------------|---|
| ANCIENT GREECE: | Black and Purple |
| ANCIENT CHINA: | Yellow (<i>return of a soul to the sun</i>) White (<i>flowers to cover the dead</i>) |
| ANCIENT EGYPT: | Yellow (<i>falling leaves</i>) White (<i>robes for the dead</i>) |
| ANCIENT ROME: | White |
| MEDIEVAL ISLAM: | Blue (<i>happiness in lands beyond the sky</i>) |
| MEDIEVAL FRANCE: | White (<i>symbol of purification</i>) |
| MEDIEVAL ENGLAND: | Black |
| MODERN FRANCE: | Black (<i>adopted by Anne of Brittany, wife of Louis XII</i>) |
| MODERN CHINA: | White (<i>black adopted recently</i>) |
| EAST INDIES: | Cream |

JACQUARD AND JACQUARD WEAVING

Photograph courtesy Wm. Skinner and Sons



NAPOLEON VISITING JACQUARD. *The inventor of the mechanical device which bears Jacquard's name made possible the weaving of patterned material without the strenuous manual labor which had heretofore been done by small boys. This not only was a benefit to those overburdened children of whom he had been one, but greatly augmented the amount of figured materials made and reduced the price as well.*

A HISTORY OF JACQUARD AND THE JACQUARD MACHINE

The ancient draw-loom was the first known attempt at figure weaving. Tradition points to its early European use in France and Holland in the 15th century. This lumbering, cumbersome type of loom necessitated two operators. The draw boy raised the specified leashes or cords on the loom and also had to attend to lowering them as well. When the warp shed was formed, the rest of the weaving operation was performed by the actual weaver. He also chose the colors he desired, dyed his own yarn, made his motif or design, and developed his own color pattern.

As time progressed there was more and more demand for varied materials. It became apparent that present conditions would not suffice and that some mechanical means would have to be devised to meet these demands. Thus, if the draw boy were to be able to work faster, the weaver would have to be relieved of his many trying burdens.

The famous Jacquard Loom was the answer to these early day difficulties.

Jacquard's head-motion was a masterpiece of perfection in the textile world, and could reproduce practically anything into fabric. Before discussing the wonders of Jacquard and his Loom, it might be well to list the important dates in the textile history

of so-called figure weaving. These happenings, collectively, gave Jacquard food for thought and finally brought forth from his efforts his loom for perfection in design, motif, pattern and weaving of intricate fabric. They are a prelude to the Jacquard era.

- 1455: Silk spinning and throwing introduced into England.
- 1480: Silk manufacturing introduced in France by many skilled Italian silk workers. Francis I, King of France, is the Father of the Silk Industry there and his influence is still felt. He had spent his early life in northern Italy and saw what was being done there in sericulture and silk weaving. When he came to the throne, one of his first acts was to organize the silk industry, in all phases, on a firm basis.
- 1510: Tapestry weaving, which had lapsed in England, was reintroduced by Thomas Sheldon.
- 1662: Tapestries were being made in Paris by the famous Gobelin family.
- 1725: Bouchon invented the perforated paper or card idea for working the draw loom to give figure fabrics.
- 1728: Falcon employed a chain of cards instead of the paper-roll plan of Bouchon. His cards were made to operate on a

- square block or prism. Incidentally, this plan is still in use today on modern Jacquard looms, the cards controlling the needles.
- 1745: Vaucanson applied a griffe to the Falcon machine and placed the apparatus on the top of the loom as a head-motion.
- 1790: Joseph Marie Charles Jacquard became known as the "fixer" for the machines made by his predecessors. He began his experimental work on the looms and from this work, in time, he became the inventor of the machine that bears his name today.
- 1801: Jacquard showed his machine and for his efforts received a medal at the Paris Exposition. His machine, however, was still not too practicable.
- 1820: The Jacquard machine was now an actuality and functioning in some textile centers. Stephen Wilson, English silk manufacturer, received a patent for a reading machine and for a punching machine to punch out the cards used in Jacquard weaving, the "piano-machine" of today.
- 1823: Coventry, England, was to become a center for Jacquard weaving. At this time there were five Jacquards there. By 1832, there were about 600 of the looms being used. In 1838, over 2,200 Jacquards were in use in Coventry.
- 1824: The first Jacquard machine to be used in this country was bought and operated by the William H. Horstmann Company, Philadelphia, Penn. It was used for making trimmings and novelty fabrics.
- 1834: Joseph M. C. Jacquard died in Oullins, near Lyons, France.
- 1842: A Jacquard machine with a separate cylinder motion which was operated from the crank shaft of the loom, was invented by J. Bellough.
- 1849: Alfred Barlow invented the important double Jacquard.

JOSEPH-MARIE CHARLES JACQUARD

Joseph-Marie Charles Jacquard was born July 7th, 1752 in Lyons, France. His father was a weaver and his mother was a patternmaker. He was destined to make the last great invention of the Industrial Revolution following the French Revolution, the American Revolution and the War of 1812.

Jacquard had a very stern father who allowed the boy little formal education, and his youth was none too pleasant. His father died when the lad was 20. The father left a small house and a hand loom as his worldly possessions. The boy began to take deep interest in the hand loom and did some experimentation with it but his interest soon waned. He became a plasterer, cutler, type founder, and then, in time, not showing too much liking for these vocations, he once more became interested in weaving fabric.

He was a soldier during the French Revolution. His son, also a soldier, was killed in the defense of Lyons against the Army of the Convention. Since he was known as a weaver, the Council of Lyons, after hostilities ceased, gave him a loom on which he was to do experimental work in the Palace of Fine Arts with the proviso that he teach some of the students how to weave fabric. Jacquard evinced great interest in his new task, his absorption constantly taking on impetus with the result that he showed much progress in his experimental labors.

In time, he went to London where he worked for the Society of Arts which offered a reward for a machine that would make fish nets. On February 2nd, 1804, Jacquard received 3,000 francs and a gold medal from the London Society; he made the machine that was selected by the Commission. It was displayed in the Conservatorium of Arts and Trades and attracted much interest. He was now on his way to greater things.

Napoleon and Carnot, his Minister, heard of Joseph M. C. Jacquard and his work. Jacquard was summoned to appear before them. At the meeting, Napoleon addressed him with — "Are you the man who can do what God Almighty cannot do — tie a knot in a taut string?" The classic answer to this was — "I cannot do what God cannot, but what God has taught me to do." As a result

of the meeting, Napoleon gave him the commission of assignment to the Conservatorium of Arts where he was allowed to work on the looms there and study the efforts and work of his predecessors — Bouchon, Falcon and Vaucanson, an interesting triumvirate.

Vaucanson . . . a Mechanical Genius

Vaucanson, particularly, was an interesting individual. He had several machines in the Conservatorium, as well as automata of many sorts. He had a duck, for example, that "could waddle, quack, swim, eat and digest food — all by mechanical process." Jacquard obtained many ideas from Vaucanson's findings and experimentation. He now began to work with vigor on what was in time to be the Jacquard Loom. By the end of 1804, he was back in his beloved Lyons and his loom was beginning to take shape. He combined the best ideas of his predecessors, improved upon them and finally constructed a loom that would perform practical figure weaving.

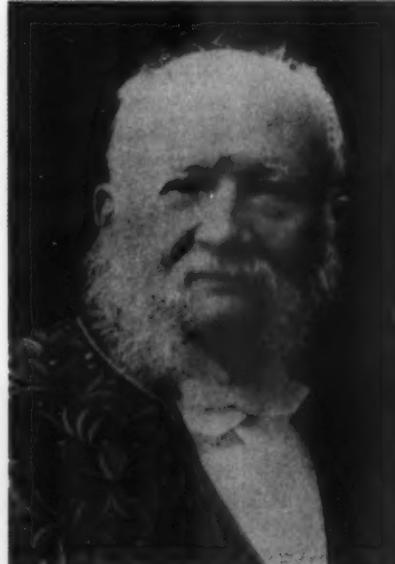
The loom was set up with weighted cords or strings which passed over a pulley and fell into perforated cards. Each motion or turnover of the loom changed the position of the cords and allowed some of them to go through the holes and draw up the warp thread so that it was skipped by the warp; others would strike the card and leave their ends in place to be woven in the regular manner. Thus, the weaver, could now pass his threads over, under or through the warp-shed as the pattern required.

Napoleon and the Inventor

Napoleon kept constant eye and interest on the progress being made by the inventor. Pleased with his efforts, the Emperor ordered that an annuity of 3,000 francs be awarded Jacquard. This was in 1806 and the award carried the proviso that Jacquard should transfer all his efforts and inventions to the City of Lyons. The Jacquard Loom was now a practical actuality.

Like other great inventors of the Industrial Revolution, however, Jacquard and his looms encountered violent opposition. And,

continued on page 98



LEFT: Photograph of Joseph-Marie Charles Jacquard. RIGHT: Jacquard silk portrait of Robert Stehli, brother of Emil Stehli who founded the American firm of the same name. The portrait is Jacquard-woven with a superfine silk thread by the Stehli Obfelden Mill near Zurich, circa 1900.





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SPECIALIZATION... A POLICY WHICH PAYS OFF

Rather than attempt to be all things to all types of dress manufacturer, Robaix engineers designs for specific fashion applications . . . and thus protects its customers

In a recent issue of **AMERICAN FABRICS** a feature editorial section dwelt on the virtues . . . if not the sheer necessity . . . of engineering the construction of fabrics to meet a specific consumer need. The trend within the entire textile industry in this country has proved both the value and the validity of such a procedure. It reversed the age-old method of first producing a cloth and then seeking a logical customer, by first finding (or creating) a specific need and then producing a cloth to fill that need in perfect form.

In the field of converting, the executives of Robaix conceived the idea that a similar policy would not only be sounder for themselves, but would result in a form of protection for their dress manufacturing clients . . . with the final result that a permanent and profitable relationship would be developed. And so the first step was taken . . . determining the field of operation.

From among the many thousands of dress manufacturing companies in the country, Robaix drew up a list of desirable prospects. These were selected on the basis of the character of their product, but not strictly on the basis of the prices of their dresses. The final list contained couturier houses, but it listed also firms which specialized in popular-priced dresses. Character and stability were the prime considerations, as well as an appreciation, by the manufacturer, of fine print patterns.

Next, the individual styling of each dress house was noted. One firm based its appeal entirely on the sophisticated type of dress; another might specialize as a source for classic or conservative fashions; a third might point specifically to the junior miss market; still another, to the spectator sports dress field.

Having drawn up its master list of prospective clients, and

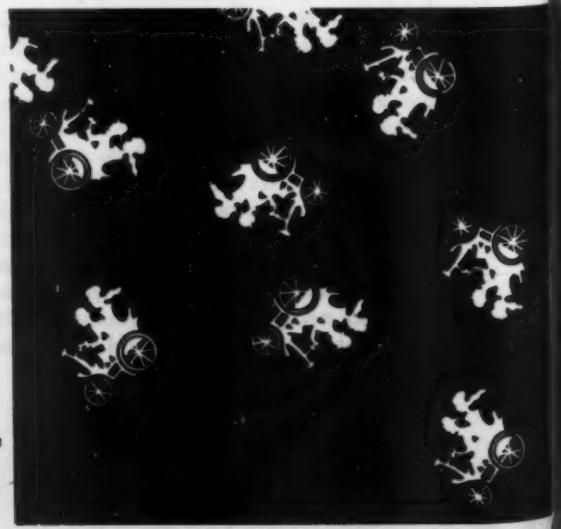
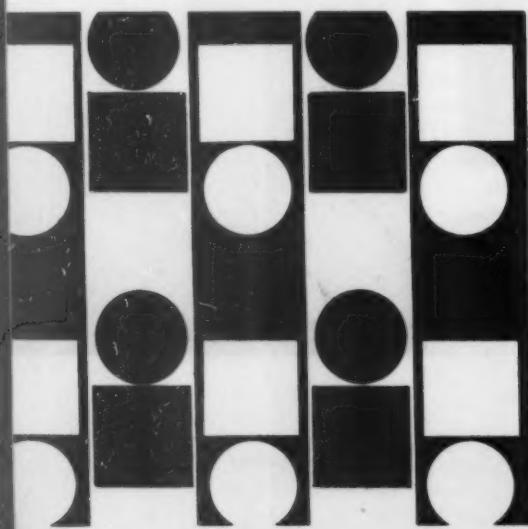
noted each one's preference and needs in pattern types, this textile house then set out to develop a line of print designs to cover their requirements. As a matter of basic policy, it was decided that every design would be originally conceived and controlled. By declining the use of outside design talent, they also eliminated the possibility of encouraging artists to execute patterns similar in feeling for sale to other converters; and this almost automatically assured the dress manufacturer of a higher-priced dress that he ran little risk of finding a first-cousin design being sold by a firm of lower-priced apparel.

As soon as this policy was agreed upon, Robaix set up a design studio on its own premises, directed by the heads of the company, and then set out to create a line of some two hundred patterns to be shown to prospects. Because they based their work on the premise of design-engineering-to-an-end-use, the dress houses were quick to react favorably. The firm which specialized in large-size dresses found, to its final satisfaction, that it could select patterns which were ingeniously contrived to give an illusion of smaller size. The junior dress manufacturer found that his customers' favorite type of pattern . . . the colorful conversation piece . . . was artfully represented. The designer of dresses carefully contrived to convey sophistication was offered a wide choice of tasteful ideas which heightened the desired effect.

Today Robaix is established firmly as a converter-with-an-idea . . . an idea which is paying off handsomely. Its history suggests that specialization, in the hands and minds of those equipped to execute such a program, does not limit but actually expands the operational horizon as well as the field for growth.

SPECIALIZATION. Designed for pleats, to produce an elongated effect.

SPECIALIZATION. For the small figure, a design to achieve a balance of proportion in the dress.



Silk Sewing Thread

FULFILLS A VITAL PURPOSE

After the manufacturer has spent many thousands of dollars in creating and selling a style to the trade, he faces the problem of producing it in mass quantities. The prescribed procedure is to make the original pattern, then to trace the markers which are laid on top of the layers of cloth. The cutter works with shears or electric knife to cut the cloth into the various segments which, when sewn together, make up the garment.

The small bundles of segments are then ready for sewing . . . and at this point the manufacturer and his production chief make a serious decision: **WHAT TYPE OF SEWING THREAD TO USE AT VARIOUS POINTS.** To the uninitiated, or to the careless, this may appear unimportant; thread, they say, is thread . . . and what difference does it make what thread?

Actually, what determines the length of time during which the garment will retain its original shape and continue to render satisfactory service, is to a great extent the small matter of thread. Just as some clothing makers, for example, use hand-tailoring at certain points and machine-sewing at others . . . just so they must decide where silk is better, or where other thread should be utilized.

Silk thread, of course, has many virtues which make it desirable in the sewing of clothing. Silk has a greater tensile strength per diameter than any other natural fiber . . . which makes it perfect for use at points of strain such as in the crotch of a pair of trousers, or in sewing the under-collar of a coat. Silk is highly resistant to perspiration; this instantly suggests silk thread for sewing at armholes and at other points where body perspiration would swiftly deteriorate other fibers. Silk has greater elasticity; it will stretch and return to size innumerable times. Silk thread handles easily and smoothly, so that manufacturers prefer it because it enables operators to work at a continuous speed.

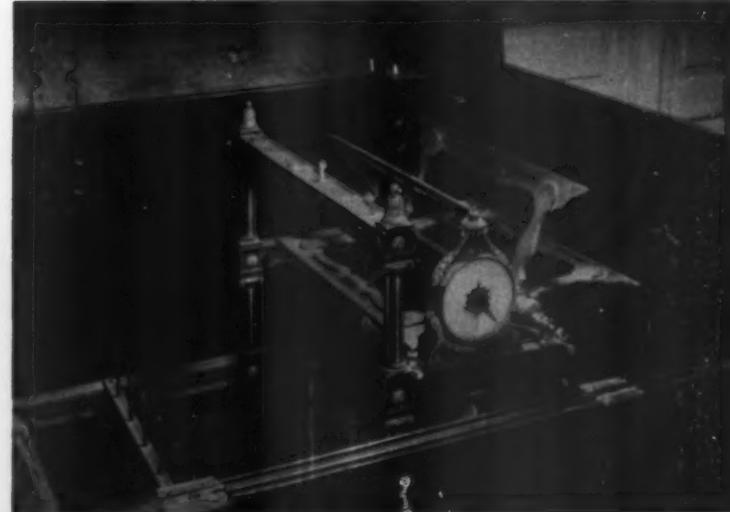
It must be brought out, however, that the development of silk to its present point of perfection as a sewing thread . . . was no spontaneous matter. It represents the hard, intelligent, and conscientious work of such good thread firms as A. H. Rice Co., which worked, and continues to work, in the direction of a better-thread-for-the-purpose.

Testing is continuously being done to keep silk thread at the required point of tensile strength; to see that it passes abrasion, elasticity, and fatigue tests; to ensure its ability to take and hold dye, to withstand sun and body perspiration and dry-cleaning.

The next time you purchase a garment, it might be profitable to spend a few minutes studying the manner in which it was sewn together. If silk was used at the vital points, the garment will be worn and enjoyed longer.

MARIE ANTOINETTE'S WINDING MACHINE

This winding machine was made especially for Marie Antoinette in Turni, Italy, in 1786. It was set up at Versailles for the Queen's amusement. Note the ivory indicator; when 400 meters of thread have been wound, a bell on the back rings. The hand-carved Louis XVI design is embellished with gold leaf. The white glass pigtail through which the thread passes is one of the originals. The hand-forged hinges and lock on the case are also interesting. Formerly there was a small loom which fitted on top. This is now in the museum in Munich. — Courtesy Scalmandré Collection.





Flemish lace-makers at work after the invention of the bobbin or pillow method which required the greatest artistic skill.



PRESERVING EVIDENCES OF PAST CULTURES FOR FUTURE GENERATIONS
The repair of old tapestries and fabrics is carried out on a systematic basis at the Metropolitan Museum of Art.

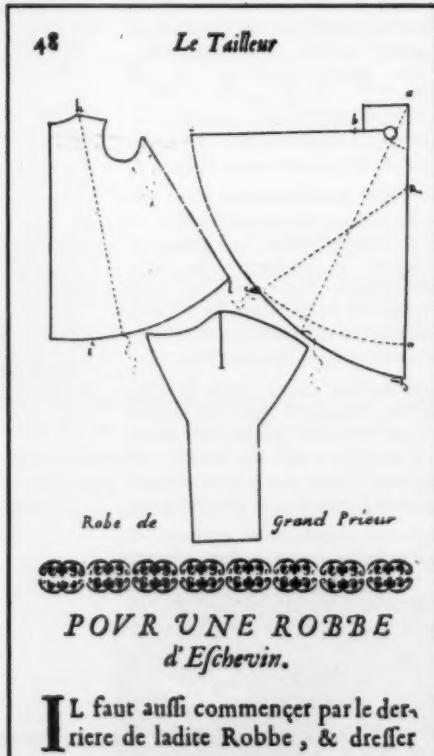
Flax Stalks are hand-fed into a roller which removes the woody portions from the precious linen fiber.



PICTURE MISCELLANY...



Officer's armored coat of blue silk embroidered with gold and colored silks . . 18th Century Chinese.



The Art of Pattern Making goes back many centuries, and this page from an old French volume is an example of the artistry and thought given to the subject.



FIRST AMERICAN TEXTILE
TRADEMARK

The Indian Head which appears above was the first identifying trademark to be used for an American cotton fabric.



Before the industrial revolution, women spun the raw wool into yarn by hand, in their own homes . . . *A scene from a recent film on wool made for the British Ministry of Education.*



THE ROSE . . . most widely used flower in the field of decoration . . . serves as painted background for an exquisitely carved medallion.



Detail of man's coat. Gold brocade, Asia Minor, about 1600. Part of *The World of Silk* Exhibition at the Metropolitan Museum of Art.



HOW TO KEEP YOUR TABLE LINENS SMOOTH

The Irish Linen Guild recommends that tablecloths be rolled around heavy paper when not in use to keep them flat and free of wrinkles.

Jacquard . . . continued from page 93

like many another genius of the time, he had to flee for his life. As time passed and saner folks began to see the possibilities of the loom for the greater glory of Lyons, Paris and all France, they began to take things into their own hands and see what could be done to calm the enraged textile workers who had feared that the loom sealed their doom. Each loom, it was estimated, did away with the work of a hundred or so persons.

Gradually the looms began to meet with favor and as a result Lyons and its superb fabrics began their fabric reign.

Joseph-Marie Charles Jacquard lived to see over 30,000 Jacquard looms being used in and around the Lyons textile area alone. At 82, he died in Oullins, France, August 7th, 1834.

THE JACQUARD MACHINE *and Some Important Derivative Cloths*

The Jacquard machine is a special mechanism situated over a hand or power loom and is called a Jacquard head-motion. The motion is used in the production of figured fabrics and in materials of high, compact texture with a pattern, motif or weave that exceeds the capacity of a harness loom. The Jacquard head motion usually replaces the head motion of a dobby loom in which the dobby motion controls the harness frames in the loom.

The chief advantage of a Jacquard is in its ability to govern individual warp threads in each repeat of pattern. It may be used in conjunction with a head motion and a limited number of harness frames, thereby creating additional possibilities for the designer to combine simple harness effects with the Jacquard. For this reason, the designer is allowed more freedom and expression in producing fancy figured effects. In fact, there is no limit to the possibilities of the design insofar as the machine is concerned.

A very wide range of fabrics can be made on the Jacquard loom which may be changed over to a regular harness loom by raising the Jacquard harness and by replacing the harness frames which will be operated by the dobby head motion. These fabrics may include blankets, brocade, brocatelle, carpets and rugs, coat lining, coatings, damask, drapery fabric, dress materials, furniture covering, handkerchiefs, labels of all types and other narrow fabrics, napkins, necktie or cravat fabric, shirting, tablecloths and table covers, loomed tapestry, Turkish toweling.

DAMASK

A figured fabric, originally made in silk, that originated in China and was brought to the Western World by way of Damascus, in Asia Minor. Marco Polo, in his travels of the 13th century, mentioned the material and gives an interesting tale about it. Named for the city of Damascus, it has been made for many centuries and is one of the most popular staple cloths today.

Damask is a flat reversible Jacquard material made of cotton, linen, rayon, silk or wool or in combinations of these major textile yarns in which the warp will be one type of yarn, the filling another. The figure and the background are made of contrasting weave formation, with the warp-effect in the figure of the same weave or vice versa. Different weaves may likewise be utilized in the figure and in the ground-effect.

A typical damask is the linen or cotton tablecloth-and-napkins set where the reflection of the rays of light on the threads shows a novel bright-and-dim effect.

Linen or cotton single-damask is made on a five-shaft satin weave. Double-damask is made on an eight-end satin construction. The fabric is beetled, calendered, and is often grass bleached. It is very durable, is a reversible fabric, sheds the dirt, and the firmer the texture, the better will be the quality. Damask launders well, retains high luster particularly when made of linen. Smaller designs or motifs give a stronger cloth than one made with long floats in the weave construction. The price range of damask is very wide, from inexpensive to costly material. Linen damask, "the Cloth of Kings," is much simulated in the trade. Other uses for

damask include furniture covering, drapery material, and general decorative purposes. Rayon has the same uses as silk damask.

BROCADE

Brocade is generally reputed to be of oriental origin, brought to a high state of perfection in France, Italy and Spain in the 16th and 17th centuries. The name, very likely, comes from the Spanish "brocado" which is derived from the Latin "brocare" which means "to figure." The French for brocade is "brocart."

The fabric is characterized by a compact warp-effect background with one or more fillings used in the construction to make the motif or figure. The filling threads, often of gold or silver in original fabrics of this name, float in an embossed or embroidered effect in the figures.

Brocade and damask differ in that the figures in brocade are rather loose, while in damask the figure threads are actually bound into the material by the use of a tight construction or weave formation. In both cases, the background of the fabrics is usually a warp-effect satin weave.

The motifs may be of flowers, foliage, scroll work, pastoral scenes, etc. Many types of Jacquard patterns and designs appear in the field of brocades, the prices of which have a wide range.

Some of the fabric, because of the yarn and the design, will show some embossed surfaces which greatly reflect the rays of light, thereby enhancing the scintillating beauty of the fabric.

Uses of brocade include curtaining, hangings, pillows, portieres, interior decoration; it is used in stage presentations, evening wear, church vestments, and on state and regal occasions.

BROCATELLE

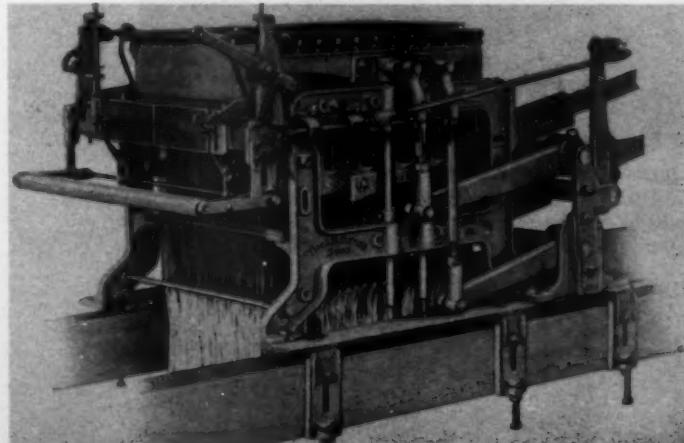
Supposed to be an imitation of Italian tooled leather, the fabric originated in the 13th or the 14th century. Brocatelle is recognized by a smooth raised figure of warp-effect, usually in satin weave construction, on a filling-effect background.

True brocatelle is a double cloth fabric made of silk and linen warp and silk and linen filling. The silk warp weaves with the silk filling to make the face of the fabric; a fine linen or fine cotton warp weaves with the linen filling to make the ground. Present day materials are somewhat changed in effect from the original fabrics, but they all have preserved the embossed figure in the tight, compact woven warp-effect.

The various warps and filling interlace with one another, but the face warp is never woven in the back of the cloth, nor does the back filling, generally speaking, show on the face of the goods. The face filling yarn does weave on the back and the back warp weaves on the face.

When not on the face of the material making the figure effect, the warp lies in between the face and the back fillings. The warp arrangement in brocatelle is either a 2-face and 1-back or a 4-face and 1-back arrangement. The filling construction is either a 1-face and 1-back or a 2-face and 1-back arrangement. Brocatelle, while classed as a flat fabric, shows patterns which stand out in high relief, a sort of blistered-effect. Brocatelle is used chiefly for drapery and general decorative purposes • END.

Detail of Modern Jacquard machine. The Halton "600" double lift, single cylinder, Jacquard Head-Motion.



*The supreme usefulness, adaptability, and beauty of
this Great Natural Fiber have made it the most universal of all
materials. In these pages American Fabrics brings you a picture
of some historical and factual aspects of wool fiber and fabric.*





SUN and EARTH . . . AIR and GRASS . . .

The elements that bring wool into being are part of the basic chemistry of Nature . . . which mysteriously works through a Sheep to transform sun and grass into the wonderful fiber wool.



From the raw wool . . . after a series of intricate, specialized steps . . . an American manufacturer produces one of the world's most beautiful finished worsted fabrics. The swatch above, which is shown through the courtesy of Forstmann, is Milateen, a fine twill with a unique tight yarn twist which gives it a deep velvety look. Probably the leading American fashion fabric for a number of years, it promises to be as important as ever for Spring, 1951.

The World Hunger for Wool

Increasingly the great natural fiber Wool has held a strong place in the needs and desires of man, but never to such an extent that we now have more customers than supply. In these pages we present a short history of the potent economic factors enlarging the market for wool . . . A brief review of Wool in History . . . The Differences in Processing Wool and Worsted . . . What science knows about Wool Shrinkage . . . Wool from Fabric to Fashion . . . how Wool is made into a Suit . . . World Wool Map . . . Wool Quiz . . . Facts about Wool . . . together with pertinent illustrations, charts, and actual Wool Fabrics.

(please turn the page)

The World Hunger for Wool . . .

DESPITE the too common notion that the peaking of wool prices, which commenced in the late summer or early fall of 1950, is the aftermath of the fighting in Korea, the simple fact is that the tense world situation merely served to bring into sharp focus the indispensability of wool when the chips are down.

True, the steepest increase in the price of wool has come since Korea blazed into flame. But it would be inaccurate to assume that wool prices were stable before that moment, or that prices rose solely because of the link between cause and effect in the world political situation and the world wool markets. Wool is as much a part of a nation's fighting armament as steel; but wool is a sheer necessity in the civilian economy and industrial field even when wars are not being waged.

The movement in wool started long before the war for Korea. To some degree it was spurred when Russia and its satellites began to bid against the democratic nations for wool. Thus, when the world wool crop began to diminish, prices began to rise far faster than would normally be the case under similar conditions. Study, if you will, the pattern of the following chart:

COMPARATIVE STUDY OF AUSTRALIAN WOOL PRODUCTION AND PRICES

| Year | Pounds Produced (greasy bases) | Average Price |
|---------|-----------------------------------|---------------|
| 1940-1 | 1,581,000,000 | \$0.955 |
| 1941-2 | 1,553,000,000 | 1.004 |
| 1942-3 | 1,520,000,000 | 1.009 |
| 1943-4 | 1,509,000,000 | .971 |
| 1944-5 | 1,334,000,000 | 1.002 |
| 1945-6 | 1,242,000,000 | 1.001 |
| 1946-7 | 1,173,000,000 | 1.232 |
| 1947-8 | 1,232,000,000 | 1.666 |
| 1948-9 | 1,265,000,000 | 1.763 |
| 1949-50 | 1,290,000,000 | *1.85 |

*Average for January to August.

| | Monthly prices paid were: | | |
|----------|---------------------------|--------|-------|
| January | \$1.548 | May | 1.827 |
| February | 1.647 | June | 1.827 |
| March | 1.669 | July | 1.998 |
| April | 1.773 | August | 2.682 |

The deep-rooted significance of the movement in the price of wool lies in the improved economic condition of the American consuming public steadily since V-J Day. During the last twelve months alone, the index of Discretionary Spending Power has overcome even the sharp rise in food costs to reach a new high. To quote a few of the pertinent statistics . . .

For the first quarter of 1950, non-agricultural families had \$63,200,000,000 in Discretionary Spending Power over and above their basic living costs and income taxes.

Of this amount, \$40,800,000,000 (about two-thirds) was in the hands of wage-earner families. Consumer savings reached a total of \$175,000,000,000 by the end of 1949 and were still rising.

Average weekly earnings in manufacturing were up by more than \$1.00 per week, adding close to \$12,000,000 weekly to workers' Discretionary Spending Power, and the current wave of pay increases in major industries will add more.

It is therefore apparent that the makings of a strongly accelerated consumer demand for wool has a sound foundation; that *more people with more money to spend* is the large individual factor which has accentuated the effect of a shorter supply on a greater demand. Add to the increase of almost 14,000,000 in the nation's population during the past decade the huge sums accumulated in savings; pyramid the picture with higher weekly

pay checks; top them off with the American consumer's urge to buy and to replace with the better things in life . . . and you begin to understand why wool is in its present eminent position.

Even as recently as the presidential term of Herbert Hoover and his promise of two cars in every garage, the American public considered the automobile something for the rich; today the possession of a car is considered normal for even the lowest-income family. As the American standard of living has risen to parallel the rise in family income, many articles previously considered luxury items have come into the fold of virtual necessities in the consumer mind. Better homes and home appliances, better clothing and more of it, better entertainment and educational facilities, are now taken as a matter of course by the masses . . . and they can afford to pay for them.

Wool in Peace and in War

Wool comes into the category of what the consumer takes in stride. We have, fortunately, no great mass of underfed and underclothed in this country; and the wonderful American wool industry has succeeded in bringing to the masses wonderful wool products at moderate prices. And so whereas in other countries a good wool garment or a sturdy wool carpet are considered true luxuries, in our country wool is accepted as a commodity to be possessed by all the people.

Simply stated, the only interpretation which can soundly be placed on what has happened to the price of wool recently is that we now have more customers for wool than the supply can accommodate with ease. The threatening war clouds served merely to sharpen the focus of the picture of supply and demand. It is true that wool is a war essential; the steps now being taken by the combined American and British governments to restrain Russia from further complicating the situation at the Australian auctions, and to retain most of the top grades for our own possible military needs, is indicative of wool's position in war. But we must reiterate . . . the main reason for the current cost situation in wool stems from healthy improvement in the American worker's ability and eagerness to use more wool.

Throughout modern history, wool has been an important weapon in the waging of wars. Wool proved to be England's main weapon against Napoleon. Nor is wool as a war essential news on the American scene. The shot fired at Lexington led to bitter cold days at Valley Forge, when General Washington watched his ill clad troops fight not only against the odds of a numerically superior British force but against the crippling cold of winter weather. The lesson of this war led directly to the establishment of a wool industry in America, beginning with a modest mill at Hartford, Connecticut in 1780.

However, with an eye to retention of control of the world wool industry, England took steps to limit the production and processing of wool on these shores. Several British operators combined to form the major American woolen mills, including Falls of Parker River, Byfield, Newbury, and Schofield. But as a restrictive measure, Britain forbade even English companies to export wool machinery to America; and so Schofield, for example, had to construct his own machinery without a model or patterns or drawings, and when he wished to build his first wool carding machine he had to return to England to refresh his memory on certain mechanical and design details.

American Beginnings

Once the American wool industry was started, it began to make rapid strides in the improvement of machinery. Erastus Bigelow and Lucius K. Knowles soon became as highly regarded in the field as the English Crompton for their inventions and improvements on wool machinery.

One of the most fortunate occurrences, coming at a time when the American woolen industry needed every support, was the manner in which merino sheep came to this country. Spain had always restricted the shipment of this fine wool-bearing sheep.

But when Napoleon conquered Spain, and that nation had to find ways to raise funds for paying the bill, she had to sell her merino flocks as one source of quick revenue. Alert to the opportunity, the American Consul at Lisbon instantly contracted for a shipment of 3,850 merino sheep to America. They multiplied

They have golden feet, says an old Spanish proverb of sheep, and wherever their footsteps are seen, the land turns to gold.

rapidly and the wool was used as the basis for a new type of fabric which was manufactured by General David Humphreys at Seymour, Connecticut. (This mill, and the model village which Humphreys founded, are still in active existence.)

By 1843 American mills had developed the manufacture of worsted cloths, but not until 1867 (at the height of the Civil War, when British fleets were blockading northern ports and barring the entry into this country of the famed British worsted suitings) did American worsteds come into popular use. Pacific Mills, in 1854, had installed the first American worsted machines. The need for uniforms not only took over their entire worsted production, but other worsted mills sprang up overnight to help fill the pressing need. For instance, cotton mills which were deprived of their source of raw material during the Civil War changed over to the making of worsteds. As a corollary, because the men were bearing arms, women had to be pressed into mill service; and so it was at this time that numerous inventions developed to lighten and speed up production.

American Wool Expansion

Meanwhile, as the American continent was being explored and developed, the American wool industry had been keeping pace. The opening of the Erie Canal in 1825, the Ohio Canal in 1833, and the Gold Rush of 1849 led thousands of hardy families to the West. Railroads were being built; clipper freight fleets were being outfitted; and these, together with the inland waterways, made it faster and easier for the pioneers to move their families and their flocks to the West.

Yes, their flocks of merino sheep were taken along, because these represented not only the source for the family's clothing and home furnishing cloths, but the potential beginning of



An initial step . . . the grading of wool.

industry and income. By the year 1850, a mere quarter century after the first barge was towed up the Erie Canal, there were 11,000,000 sheep in the Middle and Atlantic States alone! And by 1893, this country's sheep had mounted to the huge number of 63,000,000!

With this steady and widespread increase in the number of sheep, there went along the development of a widespread wool industry. By the year 1850, when we possessed only 11,000,000 sheep, this country had already invested many millions of dollars in plants. There were at that time 1,559 woolen plants of all types (not counting fulling mills) in 32 states; over 40,000 workers were steadily employed; the value of the finished product in that year was in excess of \$43,000,000, and shrewd investors ploughed an additional \$28,000,000 into further mill development.

These figures may seem small by contrast with the statistics of today; but it must be remembered that in 1825 we had only 11,000,000 population . . . in other words, we had almost one sheep for every person! By the dawn of the Gas Light Era, enormous strides had been taken by the wool industry. America became the fourth largest producer of woolen fabrics in the world; the advent of steam and electric power advanced this industry to third place by the beginning of the 20th Century.

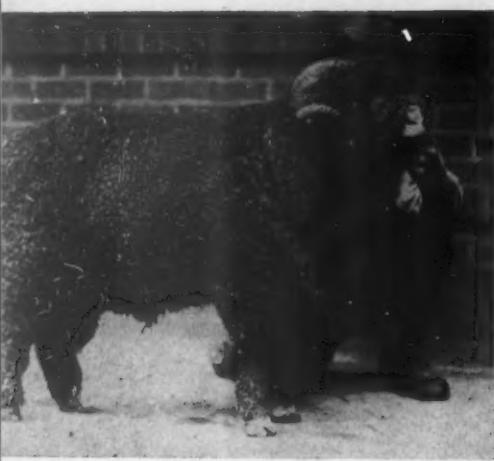
The Bible is our authority that one of man's first occupations was sheep-breeding. Abel was a keeper of sheep and Misha ruled Moab because he owned the richest stock in cattle. Subjects of the King of Israel were taxed according to the number of their rams. Small wonder that the women were always busy turning this raw material into finished products. The Book of Proverbs says that the virtuous woman works willingly with her hands. *She layeth her hand to the spindle and her hands hold the distaff.* Through the ages this conviction prevailed. Many seventeenth century artists, desirous of showing a good housewife, painted her on the distaff side.

The next big jump in American production, as well as advances in the machinery and technology of wool and worsted fabrication, came again as the direct result of a war's needs. When the first World War started, it became instantly apparent that even our then comparatively enormous capacity for the production of wool and worsteds could not begin to cope with the war requirements. The Allies set up a Board of Control to accumulate wartime stocks, and this plan was used as a model for a similar Board during the second World War. New Zealand was delegated to contract for the entire Australian and New Zealand clips in order to ensure that no enemy nation could secure a pound of precious wool; and against the possibility that either Germany or Japan might shut off the sea-lanes, both British and American owned stocks of wool were accumulated in the early war years in this country under the eyes of the Commodity Credit Corporation, a Government agency.

Strangely enough, the accumulation of wool stocks here was based on the ability of the French Army to continue fighting against Germany; but when Hitler over-ran France in 1940, it began to appear that the share of the wool previously accumulated for the needs of the French Army threatened to create a surplus and even a glut in the world wool picture. Some experts estimated, at that time, that it might take as much as 13 years to liquidate the wool surplus without endangering wool economy.

But today there is no surplus of wool anywhere. In this country we have close to 600,000 wool growers whose average annual production is in the vicinity of 643 pounds per grower. We rank third in the world's wool production race . . . but even though we exported almost 50% of our cotton crop prior to the recent

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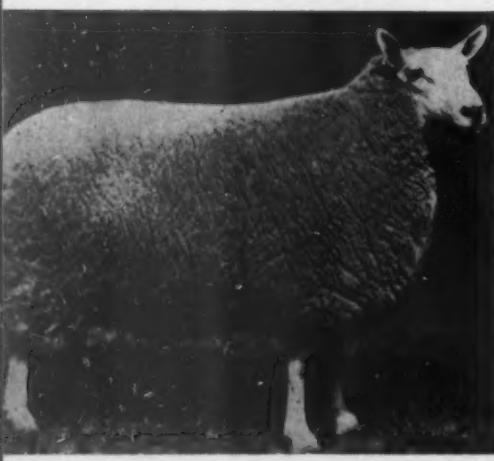
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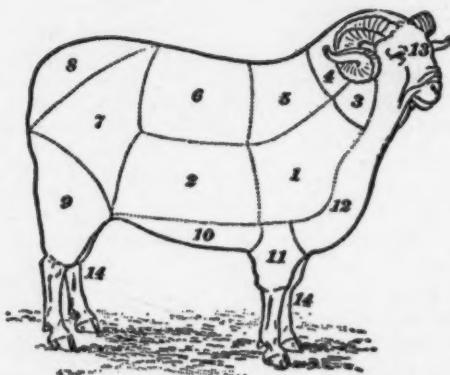
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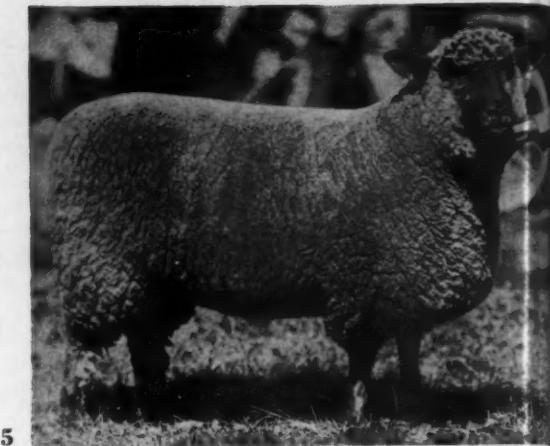
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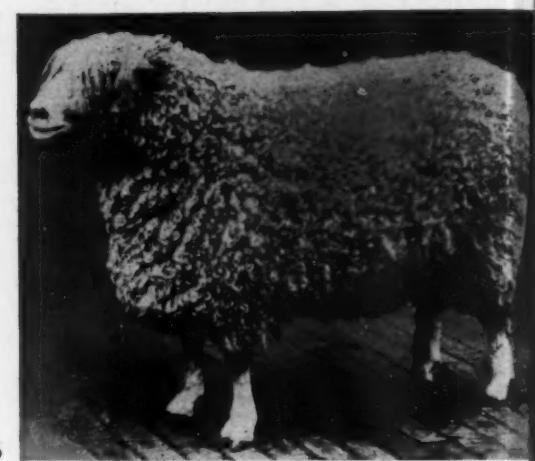
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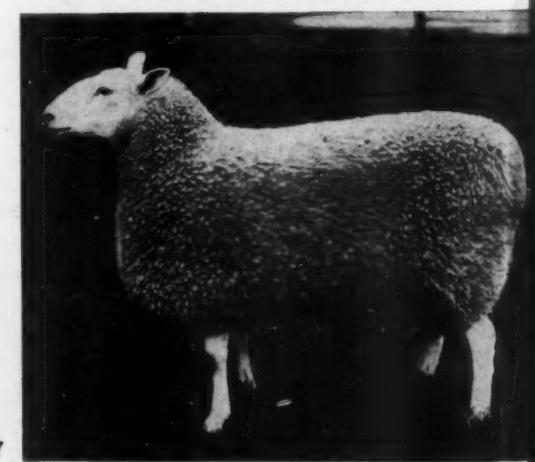
The figures indicate the order of preferred fiber in the sheep fleece. Number 1, *shoulder wool*, is considered the best fiber, followed by side, neck, and back wool



5



6



7



8

Guide to identification of sheep

Other important breeds not illustrated include Shropshire, Rambouillet, Scotch Blackface, Suffolk, Hampshire and Lincoln

1. MERINO RAM
The finest of all wools
2. SOUTHDOWN RAM
Best of the British staples
3. DORSET EWE
White and crisp staple
4. CHEVIOT EWE
A very hardy type
5. OXFORD EWE
A mid-west popular breed
6. COTSWOLD RAM
For homespuns, tweeds, etc.
7. BORDER LEICESTER RAM
A hardy, lustrous wool
8. ROMNEY MARSH RAM
Dense, fine grade of wool



All Wool Flannel Featuring a Soft Hand by BOTANY

Wool . . . continued

government ban on exports, we have to import in excess of 20% of our wool needs; in fact, on the top grades, the figure runs close to 50%!

Australian markets (which include the New Zealand crop) are our main source for better grades of wool. At the same time Russia, needing good grades of wool as much as we do, has been bidding against us in the Australian markets for the same product. A third factor, of interest and importance, is this:

During the last war, with millions of men under arms and additional millions pressed into heavy factory work, the need for meat in Britain became pressing. Under Government direction, the sheepgrowers of Australia and New Zealand were instructed to crossbreed their sheep flocks to produce animals which would yield less fine wool but more good meat. Drought acted further to cut into the wool crop. The wool yield in Australia, as you see by the chart at the beginning of this article, dropped sharply from 1,509,000,000 pounds in 1943-44 to 1,334,000,000 pounds in 1944-45 to 1,242,000,000 pounds in 1945-46 and finally to 1,173,000,000 pounds in 1946-47.

The following year the Australian wool crop rose to 1,232,000,000 pounds because not only had the urgent need for sheep meat vanished — but the world-wide demand for fine wools increasing sharply, growers concentrated on the raising of sheep for fine wool.

Still another point of importance to be brought out is this: If you study the chart referred to, you will note that the average price paid for Australian wool during the war years remained fairly constant; certainly while the Board of Control was in power, the fluctuation varied no more than pennies. During that period there was, of course, no auction. But the minute the controls were off, and the first public auction was held in 1946, the price jumped from \$1.001 per pound to \$1.232; it was bid up in the next sales to \$1.666, and while the 1950 January-August monthly average price had rocketed to \$1.85, the September quote had gone as high as \$2.682!

It would be incomplete to depict the current status of the world wool situation without dwelling briefly on one most important aspect: *the effect of a growing wool shortage on other fibers*.

Human nature (which means industry, because industry is headed by people) is such that when one source of supply or one channel of distribution is shut off, another is sought and found to replace it. Just as during the Civil War cotton mills turned to the manufacture of worsteds because they could not secure raw cotton while they did have access to raw wool

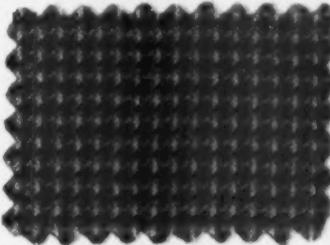


Worsted and Wool with a Peach Bloom Surface by HOCKANUM

. . . so the mills of today are working with alternate fibers to replace the wool they may not be able to secure.

Blended cloths containing wool and cotton, wool and silk, wool and synthetics of all types, are coming forth in great profusion. If the wool situation becomes more acute, undoubtedly the percentage of wool in such blends will be diminished. How well these alternate cloths will perform, how well they will be accepted by the ultimate consumer, is something which only experience will tell. At the same time, however, we must remember that just as wool is an essential under the existing wool conditions, so other fibers are also being stockpiled for possible war needs; especially it must be remembered that the chemicals needed for the production of synthetic fibers are a vital necessity in the production of war goods.

Thus it is evident that between the natural tendency of industry to secure replacements for unavailable wool supplies, and the simultaneous pressure put on the producers of other fibers to channel their production into war industry needs . . . the plight of the companies which produce or use fibers other than wool will become more acute.



Virgin Wool Worsted Check by MILLIKEN

Already evidences of the coming condition are apparent. After the first brief flurry of price increases in all textile fields when our troops marched into Korea, and the following hiatus, prices have remained at a level considerably higher than during the pre-Korea period. The Congress has already enacted legislation empowering the President to exercise controls over both production and prices; he has stated that by April, 1951 agencies will have been organized and ready to enact the National Defense Production Act to the end that necessary fabrics reach vital goals, and prices are held in check.

At the top of the fibers considered essential is, of course, wool as you have concluded from this study. No war can be won by a nation's armies or its civilian population without wool. Industry has long been aware of wool's importance. Every war in modern history, right up to the Korean conflict, has served to bring it to the world's attention.

But even beyond the world political situation, the basic economic factors which determine the direction in which the American business graph moves indicate that the consumer demand for wool must continue to gain steadily. If you use the year 1939 as a base of 100, then the Discretionary Spending Power of the average non-agricultural family during the first half of 1950 was 179, and the average wage earner's family attained the astronomical figure of 309 . . . almost triple the Discretionary Spending Power of 1939, with the trend still up!

The same force which will drive the consumer to buy more cars, more television sets, more luxuries and greater conveniences . . . this is the force which will exert constantly growing pressure on the world wool markets. They will want more and better wool products; they will have the money to pay for them; and they will buy more wool because traditionally in this country people have looked to wool . . . *all wool and a yard wide . . . as a criterion to be attained*.

Now let us proceed to an examination of why, when people have more money to spend, they seek wool by preference . . . and of the unique qualities possessed by this wonderful fiber.

(please turn the page)

WOOL PERFORMS BEST WHEN KEPT WITH CARE

A GOOD BRUSH

Because of its unique surface texture, Wool is quickly revived by careful brushing. A soft but firm brush should be used to remove every particle of dust and gently lift the Wool fibers back to their natural springiness. Almost invisible specks of dust hide away under collars, lapels, revers, pleats, etc., and these places should receive special attention. Daily brushing can do wonders in preserving the fresh appearance of any Wool garment, and add considerably to its life.

GIVE THEM AIR

Wool clothing benefits tremendously by being hung where there is free circulation of air immediately it is taken off. Wool and air are natural partners, and the fibers will revive like magic. If garments are wet or muddy, hang them in the air away from direct heat. Mud will brush off easily when the Wool is dry. Wool clothing well repays an extra special brushing and shaking in the sun every few weeks. Most spots can be removed from Wool easily if treated at once with warm water and a soft sponge.

ROOM TO BREATHE

Like anything else, cloths are all the better for an occasional rest; so, after brushing and airing, put wool garments away in a roomy wardrobe or cupboard for at least 24 hours. Then wear them in turn.

BEFORE YOU STORE

When storing clothes for any length of time, pack them carefully. Remove all spots and stains, and then the best plan is to make up a parcel, using heavy paper and sealing the ends with gummed strips against dust and moths.

DON'T BRUSH KNITWEAR

Knitted fabrics are not suitable for brushing. It is best to shake garments gently after each wearing, and re-shape by drawing the sleeves into place, and adjusting neckline, wrists and waist. Then they can be spread out on a bed or chair, and given a good airing.

WOOL VERSUS THE MOTH

Some of the modern sprays and insecticides are remarkably efficient, getting rid of every trace of moth without the slightest effect on the fabric. But even more important are the means, recently perfected, of treating Wool so that it actually *repels* the moth. Wool so treated retains all its natural softness and comfort, yet moths won't go near it. But even when all Wool is proof against moths, a few simple and regular precautions will always be advisable to ensure permanent immunity.

GET THE GRUB

Most people know by now that it is the moth grub and not the moth they see flitting about, that does all the damage. Autumn is the danger period, for that is when moths lay the eggs from which the grubs hatch out. The eggs themselves are often very difficult to detect, each being no bigger than a pinhead, and they are usually found in the darkest

and the dustiest places. The secret of moth-prevention is to clear away the eggs before they can turn into grubs.

MOTHS HATE FRESH AIR

Wool likes fresh air — moths can't stand it. They like to be left quietly undisturbed in the dark. So it is a very good idea now and then to hang clothes out in the sun. Wool thrives on such treatment, for the fresh air revives the fibers. Brush clothes well, and shake gently, at the same time making a careful inspection underneath seams, folds, cuffs, turn-ups and other likely places for signs of moth eggs.

KEEPING MOTHS OUT OF UPHOLSTERY

The moth attacks upholstery most often by eating its way through from the back. So the important thing is to give upholstery a regular brushing, beating and pummeling, paying special attention to the undersides of chairs and cushions, the grooves around the seats, and all out-of-the-way places. Curtains, too, should be brushed regularly to prevent the moth from settling down.

CARPETS WANT WATCHING

Carpets provide nice cosy quarters for the moth, and the most obvious place in close-fitting carpets is right around the edge where it hugs the wall. Lots of dust and fluff gather there, and this should be brushed out regularly, particularly in the autumn months when the eggs are laid. Another refuge for moths is where the carpet goes under furniture.

WASHING WOOL KNITWEAR

Wool knitwear should be treated with special care because of its extra elasticity. When wet, garments should be lifted with both hands to ensure proper support and to guard against loss of shape. Drying forms are ideal.

WHEN WASHING BLANKETS

Hang over two lines in a dry, shady spot. Turn the blanket occasionally for speedier and more even drying. Shake it once or twice to keep it fluffy. When dry, brush with a soft brush towards the binding on both sides to raise nap and open warmth-holding air spaces.

CARE FOR YOUR SUIT

Pressing and cleaning are all right when needs must, but they should never be a substitute for regular daily care. Wool is quite capable of looking after normal wrinkles and creases if given a chance. Regular brushing, particularly behind the lapels, in seams, and under trouser turn-ups, is very important. With careful folding and hanging, Wool will keep perfect shape and fit. A narrow strip of strong material sewn inside trouser leg where they rub against shoes prevents wear.

INTERESTING WOOL FACTS

WHEN KNITTING BEGAN

Hand-knitting was first mentioned in 1530 during the reign of Henry VIII, though it is undoubtedly much older than that, the word *knitting* being derived from the Saxon *cynnan*. The knitting of stockings, previously made of cloth, became common under Elizabeth, and

ever since then the twin pastimes of knitting and crochet have grown steadily in popularity. Crochet, which is worked with a crochet hook (the word derives from the French *croche*, meaning a hook) gives a fabric which is soft and full, slightly more bulky, and less pliable.

WOOL IS IDEAL FOR KNITS

Wool is ideal for knitting, whether by hand or machine, and Wool knitted garments are exceptionally elastic, crease-resisting, and not in the least afraid of the wash. Knitting machines produce either flat fabrics for tailoring (usually called Wool jersey) or make garments complete. Some of the new jersey fabrics, particularly for lingerie, are so fine that they are difficult to distinguish from light-weight woven materials.

OLDEST KNOWN FIBER

Wool is a natural fiber, and is undoubtedly one of the most ancient protections for man against the elements. Man first wore the skin of sheep, with its woolly fleece; much later he learned how to make the fiber into a primitive overcoat. Ancient records show that the art of cloth-making was practised nearly 4,000 years ago, and we know that Wool cloth was amongst the earliest articles of barter.

WOOL PLY VARIES

The word *ply* derives from a Latin word meaning *fold*, and *ply* in knitting Wool refers to the number of individual threads folded or twisted together to make a thickness of yarn. But Wools of equal *ply* are not necessarily of equal thickness, for that depends on the thickness of the threads and also on whether they are twisted tightly or loosely.

FELTS TO THE FORE

Modern felts have a smooth, hard-wearing surface that does not soil easily and cannot wear threadbare since the color and texture are constant throughout the material thickness.

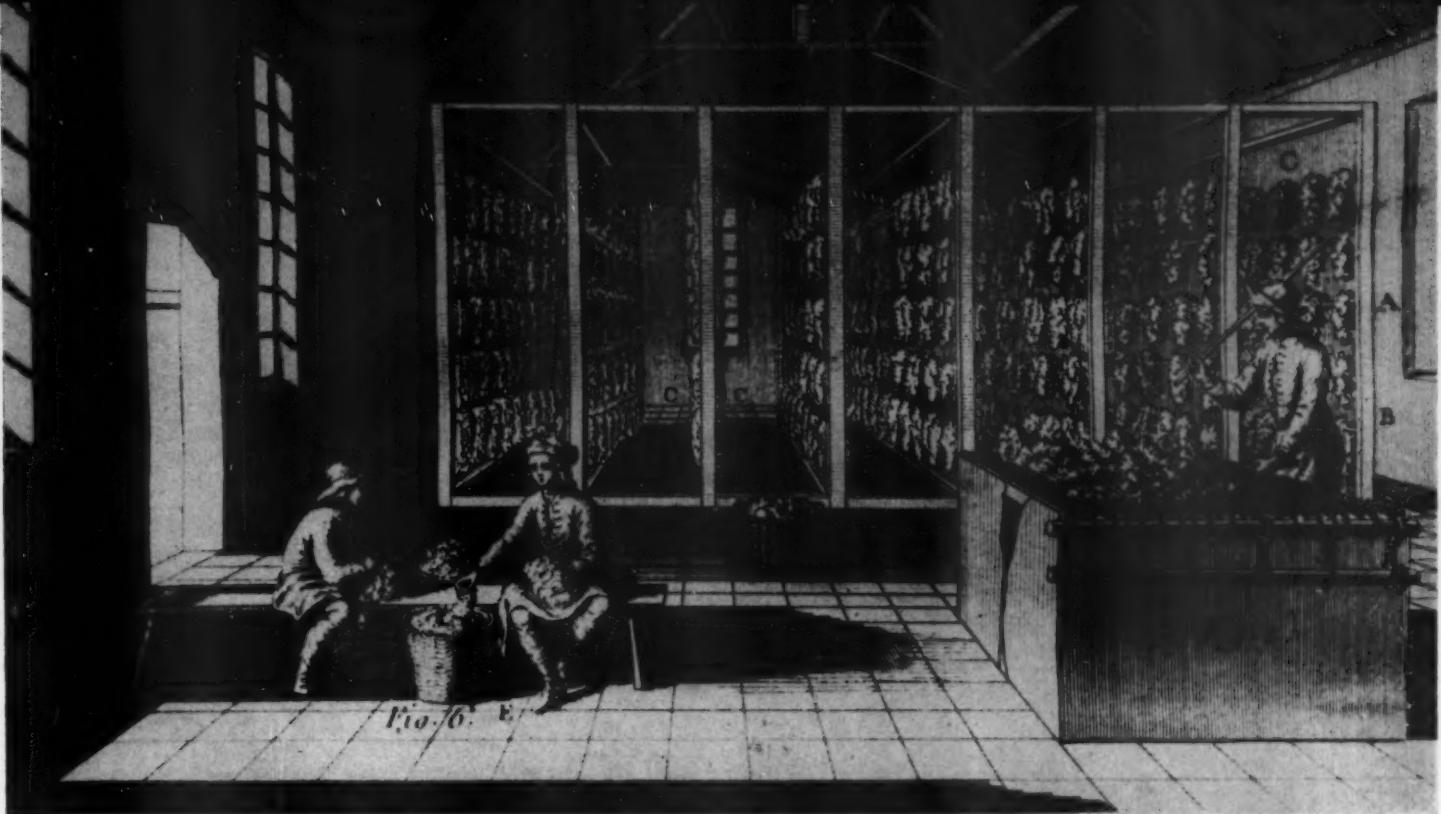
ARABS IN THE DESERT

Desert Arabs still wear the traditional Wool burnous, or hooded cloak, to protect themselves from scorching sun by day and the rapid change to bitter cold at night.

BRITAIN AND WOOL

Britain has been linked with the story of Wool from earliest times. When the Romans landed nearly 2,000 years ago, they found that the people of these islands could already dress, spin, and dye Wool. Sheep-breeding flourished in the Middle Ages, but with the development of the British Empire in the nineteenth century, the Dominions, with their wealth of raw material, gradually became the major source of Wool supply for the then rapidly expanding Wool manufacturing industry of Britain. Today, three quarters of world exports of fine clothing Wool comes from the three Dominions of Australia, South Africa and New Zealand.

The Woolsack, on which the Lord Chancellor sits in the House of Lords, was first placed there in the 14th century to remind peers of the importance of England's staple trade. Some years ago it was found to be stuffed with horsehair, and was re-stuffed with Empire Wool.



STORE HOUSE FOR RAW WOOL IN THE 1700's. This copper engraving from the *Encyclopédie des Arts et des Métiers*, 1751-1780, shows sorting and cleaning operations. Fleece of various grades are neatly arranged on the storage racks in the back of the room. In the foreground two apprentices are loosening the new wool so that it can be more easily cleaned. Wool cleaning consisted of two parts — one mechanical, the other chemical. To remove impurities, the wool was first beaten on a specially constructed table formed by a screen of cords. Its elasticity prevented any damage to the wool. The dust and dirt fell into a receptacle placed under the table. After this, the wool was washed by placing it in a basket and letting a stream of fresh water drain through it for some time.



DO YOU KNOW . . . that from raw wool status to end use, wool requires over seventy specialized handlings to attain the beauty and functional perfection expected of nature's unique fiber? The photo at left, above, shows an expert ascertaining the density of the fleece. At right, the finished cloth is being inspected for possible defects.

WOOL—it has a fascinating history

The Father of animal husbandry, particularly with regard to sheep, is Lucius Junius Columella who lived in the reigns of Julius Caesar and Tiberius Claudius — 100 B.C. to 54 A.D. Columella fostered breeding, supervised raising of sheep, and was overseer in the production of woolen cloth for the Roman Legions. He wrote a book, well known in textile and research circles, called *De Re Rustica*. The ideas, aims, methods, suggestions and principles of Columella are still adhered to in the major wool raising areas, as well as in the major textile schools and colleges of the present day. Columella was a Roman who lived in Cadiz, Spain. His vast estates were near Cordoba.

Alfred the Great, 871 to 901, of England did much to stimulate the woolen industry in Britain. His mother fostered spinning among the women folks in the home, so that increased yarn could be made available for the men weavers and finishers.

In 1197, King John of Magna Carta fame persuaded Parliament to regulate the dyeing of woolen cloth, which was being offered to the buying public.

The Thirteenth Century saw the rise of the famous Monastery Wool which was grown under the auspices of the many abbeys in England, Scotland and Wales.

A petition of protest addressed to Edward I, King of England, in 1279 cited the fact that *the value of wool exported to Flanders on the Continent is equal to nearly half the total value of English lands.*

Edward III, of England is known in history as the *Royal Wool Merchant* and the *Father of English Commerce*. His dates are 1327-77.

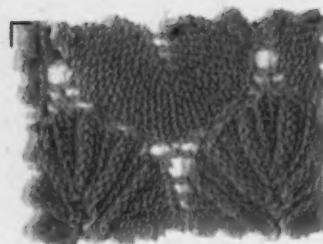
The Wool Wheel or High Wheel with its intermittent motion came into being in 1400.

Edmund Cartwright, England, invented the power loom and the comber frame, 1774.

In 1775, the good folk of Philadelphia gave up eating lamb in order to conserve sheep so that the wool might be used for yarn to make clothing for needy soldiers and civilians for the American Revolution.

Samuel Crompton, in 1779, invented the mule spinning frame in England. The machine was made from a combination of ideas from the spinning jenny of Hargreaves and the spinning frame of Arkwright. Drawing of the fibers was done by the carriage ideas of Hargreaves, and the roller plan of Arkwright. Thus, the name *mule* was given to the machine, which was a *hybrid*. And the name is still used today.

By 1788, England had over 300 laws and statutes pertaining to the woolen and worsted industry.



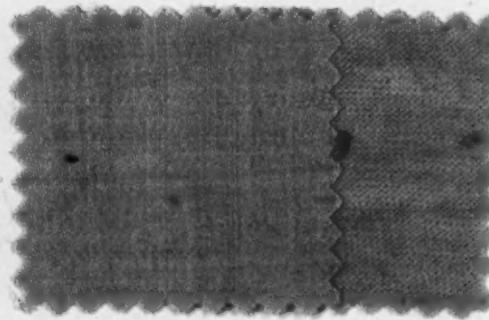
Puckered Lace Knit Worsted by
I. A. WYNER



Traditional All-Worsted Serge
by LORRAINE



Wool and Nylon Window Pane
Check by DUNDERRY OF ROCKFORD



Twin Worsteds, Flannel and
Jersey, by MIRON

The first American-built wool carding machine was set up in Newburyport, Mass., in 1793. It was used in the village of Byfield, Mass., also noted as the place first to use water power to run a mill.

In 1533 a citizen of Brunswick, Germany, invented the so-called *bobbing wheel*. This was a regulation spinning wheel with a cranked axis on the large wheel, and an added treadle by which the spinner could rotate the spindle with one foot. Incidentally, the women were now able to work *with their mouths free*. Thus gossiping, in time, became a fine art among the spinsters who carded wool, hence gave rise to the expression *spinning a yarn*.

William Lee invented his knitting frame in 1589. Only woolen stockings were made on the machine. Ten years later Lee was making silk stockings and presented Queen Elizabeth with the first pair.

The London Company sent a flock of sheep to the Virginia Colony in 1607; shipments were made to Boston around 1630.

John Pearson built the first fulling mill for treating woolen cloth in America. This was in Rowley, Mass., in 1634.

The first worsted mill in this country was established in Boston, 1695. Pennsylvania had its first fulling mill in 1700, in Philadelphia.

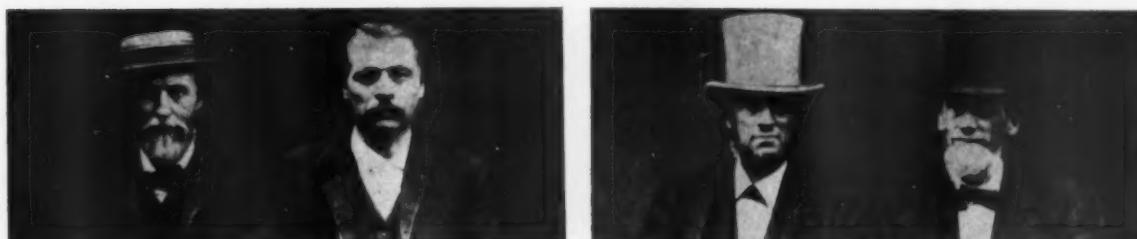
In 1733, John Wyatt and Louis Paul of England invented drawing rollers to draft fibers so that yarn would be possible by machine methods. They also received patents for the *perfection of spinning machinery*. John Kay, another Englishman, invented the fly shuttle. Ten years later Wyatt and Paul invented the revolving cylinder for the carding frame. By 1760, Kay had invented the dropbox loom; in 1764, James Hargreaves of England invented the spinning jenny, named in honor of his wife. The drawing of the roving on the frame was done by the carriage.

Homespuns and tweeds, always popular staples in the trade, are made from the so-called luster wools which originated in Great Britain but are now raised in other great wool centers — Lincoln in Lincoln County, Leicester in Leicester County, Cotswold in Gloucester County, Cheviot in the Lowlands and Highlands of Scotland, Romney Marsh in Kent; Shetland, Hebrides, Harris, Lewis, and other Island sheep.

The United States Bureau of Standards, the Department of Animal Husbandry, the Department of Agriculture, and the Department of Commerce have all been instrumental in improving the fiber quality of wool raised here. Scientific methods of improving sheep flocks have been introduced since 1883. State Experimental Farms, connected with State Universities in accordance with the Land Grant Bill of 1862, have done splendid work in improving breeds and fleeces. In the past, this country raised much carpet wool, the poorest in grade of the four types . . . combing, carding, clothing, and carpet. The United States does not produce a single pound of carpet grade wool at present.



A typical scene in innumerable American homes of the 18th Century . . . work in a family textile shop during the era of domestic industry. The woman at the spinning wheel is reeling the yarn from the flier onto yarnspools, aided by a spooler (center). At the right is a knitting frame for stockings.



Early manufacturers of textile looms in America . . . at left, Horace Wyman and George Crompton; right, the brothers F. B. and L. J. Knowles. America's famous textile machinery plants were founded in middle of last century.



A SHEEP MARKET IN THE MOUNTAINS OF NORTHUMBERLAND, CALLED CHEVIOT HILL. English wool attained world importance through the development of crossbreeds such as the Leicester and Lincoln. Up to the beginning of the past century, English wool was known as the long, lustrous kind. Attempts to develop a pure merino flock in the British Isles

were unsuccessful, but the crossing of this Spanish breed with native stock produced a fairly fine wooled sheep. Cheviot wool is the result of a crossing of merino sheep, supposedly saved from the wreck of the Great Armada, and the native cheviot sheep. It eventually became the backbone of the tweed manufacturing industry in Scotland.

Woodcut by John Carlton, 1887.

WORLD MAP OF WOOL

Together with a compendium
of interesting facts about wool



1. The word *sheep* comes to us circuitously from the Sanskrit root *Av*, which means *to guard*. This seems to suggest that even in those ancient days it was a well known fact that domesticated sheep were helpless when exposed to danger. Thus, careful tending and guarding were in order for sheep in contrast to cattle and most goats which could shift for themselves. Sheep, the most warm-blooded of all animals, are probably more dependent on man than any other domesticated animal.

2. The old *Truth-in-Fabrics* project of Senator Capper of Kansas, fostered by him since 1923, resulted in the passage of the Wool Labeling Act in 1939.

3. Texas produces the greatest amount of wool and cotton of any state in the Union, about 25% of the wool raised here. The fifteen leading wool growing states, in order, are: Texas, Wyoming, California, Colorado, Montana, Idaho, New Mexico, Utah, Ohio, Oregon, Michigan, Missouri, Arizona, Nevada, and Iowa.

4. By 1768, George Washington had at least one yard of woolen cloth woven daily on his hand looms which, incidentally, may still be seen at Mount Vernon. He always showed much interest in merino sheep and imported rams at various times.

5. Shrinkage in wool is the loss which occurs in the scouring process which separates yolk, suint and remaining foreign matter from the fibers. Yield is the weight of the wool following scouring and drying . . . the gross weight minus the actual shrinkage . . . known as clean content.

6. There are forty original breeds of sheep which have been developed into almost 250 cross-breeds, all of which are in demand since the world supply of wool is rapidly waning.

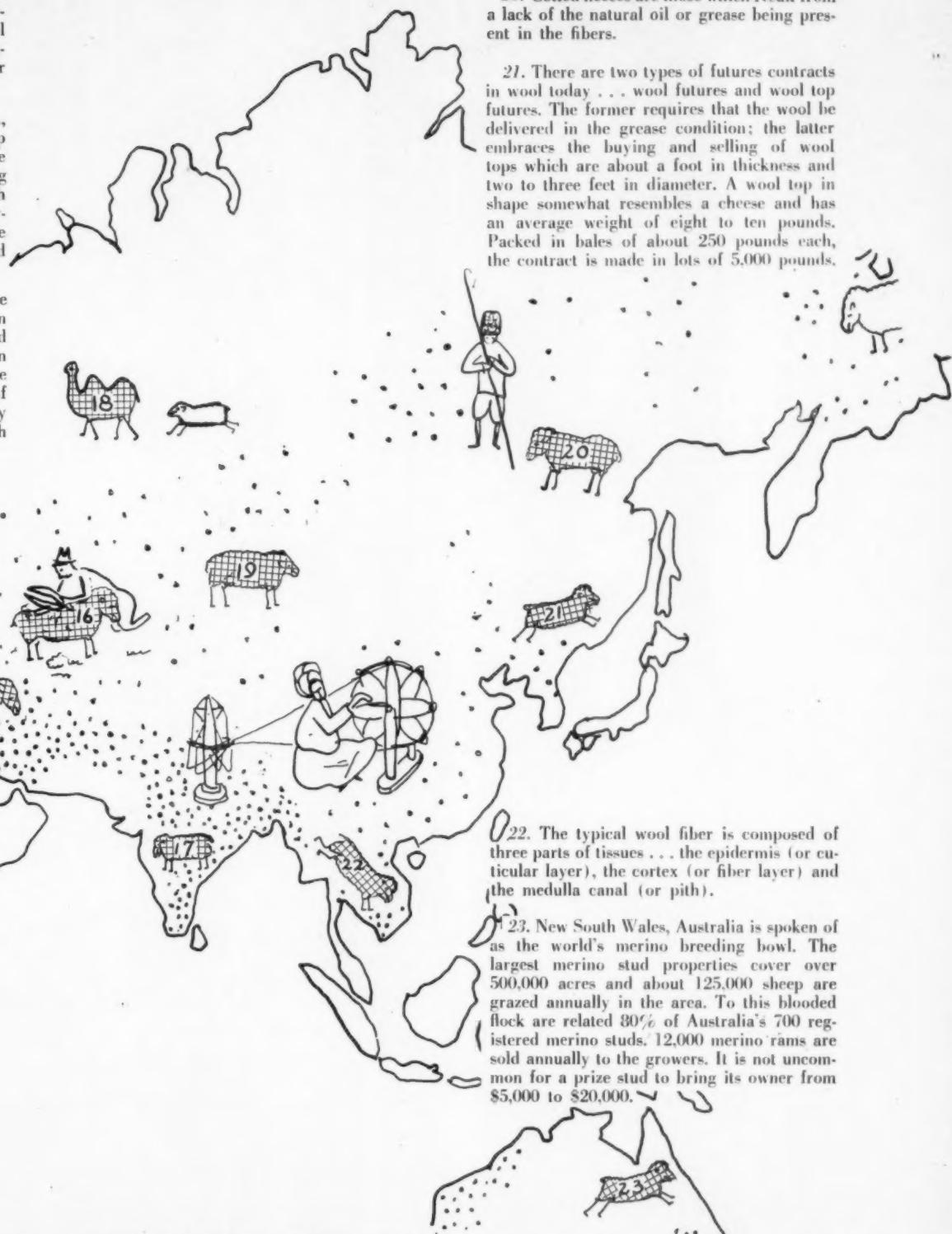
7. The first mention of the word *worsted* was made in 1315 during the reign of Edward II, King of England.

8. Spain, where Columella carried on his great work, continued to lead the world in the merino sheep industry for many centuries.

12. Despite the high quality of woolen and worsted fabrics made in England, it is interesting that Great Britain raises no merino wool which is used in these better grades of material. Merino wool is supplied to the mother country by the colonies.

13. It is a known fact that around 200 B.C., the Romans were practicing scientific sheep raising and breeding. They developed the famous Tarentine breed of sheep by crossing Colchian rams imported from Greece with Italian-bred ewes. The reader will be interested in noting that this combination was the forerunner of the present day merino breed of sheep, the best in the world.

14. Yolk is the fatty grease deposited on the wool fiber. It is secreted through the pores in the skin of the sheep and may be compared with the natural oil in the scalp of a human being. When the oil is not supplied to the scalp a person loses his hair; in the case of sheep, while they do not become bald, they do however produce an inferior fleece which is harsh, boardy, kempy and lifeless.



15. About 4200 B.C., relics of sheep were found in the Tel Asman or Great Hill on the banks of the Euphrates River in Mesopotamia. The earliest known representation of sheep is a mosaic of Ur, not far from the present Iranian Gulf. This was about 3500 B.C. About 3000 B.C., the people in Britain wore some crude form of woolen garments during this era known as the Bronze Age.

16. Carpet wool, used to supply the several great carpet plants in this country, is imported from all over the world to supply the great demand — Scotland, Iran, Iraq, Turkey, North Africa, etc.

17. Wool dyeing was established as a craft in Rome as early as 715 B.C. This ultimately developed into unions of dyers, or guilds.

18. Wool bearing animals belong to the order known as Ruminantia, which includes all animals which chew their cud. Sheep, goats and camels are in this category. Sheep belong to the class known as Ovidae and they occur in a number of species which vary a great deal in form, distribution, and geographical location.

19. Australian butts are irregular sacks of wool which contain 196 pounds of grease wool or 112 pounds of scoured wool with a tare of not less than 11 pounds.

20. Cotted fleeces are those which result from a lack of the natural oil or grease being present in the fibers.

21. There are two types of futures contracts in wool today . . . wool futures and wool top futures. The former requires that the wool be delivered in the grease condition; the latter embraces the buying and selling of wool tops which are about a foot in thickness and two to three feet in diameter. A wool top in shape somewhat resembles a cheese and has an average weight of eight to ten pounds. Packed in bales of about 250 pounds each, the contract is made in lots of 5,000 pounds.

22. The typical wool fiber is composed of three parts of tissues . . . the epidermis (or cuticular layer), the cortex (or fiber layer) and the medulla canal (or pith).

23. New South Wales, Australia is spoken of as the world's merino breeding bowl. The largest merino stud properties cover over 500,000 acres and about 125,000 sheep are grazed annually in the area. To this blooded flock are related 30% of Australia's 700 registered merino studs. 12,000 merino rams are sold annually to the growers. It is not uncommon for a prize stud to bring its owner from \$5,000 to \$20,000.



24. The farther away from civilization wool is grown, the cheaper becomes the price; hence Argentina, Uruguay, Australia, South Africa, Tasmania and New Zealand are the leading wool producing countries. The great bulk of all grease wool comes from below the equator; woolen and worsted clothing is worn by all the people of the world, chiefly by those who live north of the equator.

WOOL'S MULTITUDINOUS FACETS APPEAL TO PEOPLE

Man has developed almost numberless uses for this wonderful fiber; it serves admirably under all climatic conditions, and in a profusion of forms. Here are some of the reasons why people choose wool for themselves, their homes, and in industry:

WOOL IS WARM

Wool is a natural insulator. In the loose, porous texture of Wool fabric, countless little pockets of air are entrapped, and this air acts as a constant protection against loss of heat and penetration of cold.

WOOL IS COMFORTABLE

The comfort of Wool is due partly to its luxurious softness, and partly to its natural elasticity which enables Wool garments to shape themselves to the figure without in any way restricting body movements.

WOOL IS ABSORBENT

Wool removes perspiration moisture from all contact with the skin, and will absorb up to 30% of its weight of moisture *without becoming damp or clammy*. This is a very valuable property for comfort and hygiene.

WOOL PREVENTS CHILLS

Most chills are caused by sudden changes of body temperature, usually from hot to cold. Wool provides constant warmth however much the outside temperature may fluctuate. Wool also generates heat within itself when it meets cold, damp air . . . a double protection.

WOOL IS COOL IN SUMMER

In the Summer, when people wear fewer and lighter clothes, lightly woven Wool fabrics ensure an even temperature and proper ventilation. Perspiration is absorbed naturally, and both the skin and underclothing are kept comfortably dry. In desert countries Wool is worn as protection against the heat of the sun.

WOOL IS NATURALLY HEALTHY

Wool, being a pure animal fiber, is ideally adapted to the body's needs. The porous texture of Wool fabric, in fact, bears interesting comparison with the human skin with its millions of tiny pores through which we breathe and maintain even body temperature.

WOOL IS A VERSATILE MATERIAL

The astonishing thing about Wool is its versatility. It can be spun, woven, knitted, dyed and felted. It produces an immense variety of cloths from rugged tweeds to the most delicate fabrics imaginable. It supplies not only clothing, but curtains, carpets, upholstery, and a wide range of felts.

WOOL COVERS THE WORLD

Wool is worn in the heat of the tropics and in the intense cold of northern climes. Impervious to climatic change, it is particularly suitable for countries which are renowned for climate vagaries.

WOOL IS STRONG AND DURABLE

Wool can take it. Its capacity for hard wear is immense. A single Wool fiber is actually as strong as a thread of gold of the same

thickness! Wool puts up resistance to wear at pressure points such as elbows, knees, seats, because a Wool fiber can be bent thousands of times without even weakening.

WOOL HAS NATURAL ELASTICITY

A single Wool fiber can be stretched 30% of its own length without breaking and, when released, it will return to normal. If a Wool garment gets crushed, it need only be hung up to smooth out its own creases.

WOOL RESISTS FIRE

Wool, if it does catch fire, tends to smoulder and go out. If curtains, carpets, and upholstery, as well as clothes, are all made of Wool, the risk of fire is greatly reduced.

WOOL IS COLORFUL

Wool, owing to its cellular construction, allows dye to penetrate more deeply than any other fiber, so that some of the softest, loveliest colors are found in Wool.

WOOL FELTS PERFECTLY

Wool, naturally scaly in structure, can be felted as little or as much as desired. Felting is very valuable in weaving as it helps to provide cloths of different weights and textures. Pressed felt is not a woven material at all, but is obtained by compressing the actual Wool fibers into a compact mass, and great variation in weight, quality, hardness and thickness can be achieved. Industry uses felts for absorbing vibration, heat-insulation, and for deadening noise. Fashion makes free use of them for hats and accessories. Every household puts them to hundreds of uses as paddings, linings, mats and coverings . . . everything from under-carpets to penwipers.

WOOL FOR DRAPERIES

Whether draperies are required mainly for decoration or for keeping out the cold, Wool is perfectly adaptable, and can provide homely tweeds, printed felts, sheer Wool nets and fine printed worsteds to produce almost any effect desired. Wool draperies hang beautifully, resist creases, and keep their shape and hang even if soaked by rain through an open window. There is no risk of their flaring up should a spark shoot from the fire, and with new methods of shrink control the latest Wool fabrics can be washed without a qualm any time they need it.

SITTING ON WOOL

Chairs are upholstered in Wool which is soft, springy and warm, and prevents shine on clothes. Enormous scope is offered to designers. There are colored felts which combine well with polished wood to give clean, modern lines; hard-wearing, easy-to-live-with tweeds for the family armchair; heavy twills, cords and reps for all purposes; and fine printed wools for loose covers that wash beautifully. A neat finishing touch is given by contrasting edgings and pipings in colored Wool

that also protect corners from excessive wear. One of the latest upholstery developments, sure to be welcome in the kitchen and nursery, is plastic-covered Wool, in bright colors, which does not chip or crack and can be sponged to remove marks.

TRAVEL ON WOOL

90% of the world's luxury cars are fitted with Wool upholstery. This extra comfort can be obtained in cars of every type and price.

Wool upholstery is favored by all the luxury passenger transport services.

DRIVING ON WOOL

Wool upholstery is healthy and comfortable in all weathers. It is never chilly on wintry mornings, or blazing hot if you park in the sun.

WOOL ON THE CARPET

As early as the 14th century, carpets were made by hand in Spain entirely of Wool, and the craft probably reached its peak in the 16th century amongst the Turks and Persians, to whom the carpet seems to have been the most important item in the home, being used for sitting on, sleeping on, and even as a table for meals. Wool has the strength and resilience essential to the surface of a carpet. Light-colored rugs, once considered impracticable, are now made of woven Wool which can be washed easily and often.

WOOL AND SLEEP

The skin never sleeps, and the importance of Wool for night garments, winter and summer, lies in its natural absorbency and its ability to keep the skin free and well ventilated. Wool creates and maintains the even, comforting warmth that helps you sleep the clock 'round, and in hot weather never becomes clammy or uncomfortable. Even feather-weight Wool fabrics possess natural strength and elasticity which enables them to give comfortably and to withstand the pull on a fabric which sometimes occurs when turning over during sleep.

WOOL FOR BLANKETS

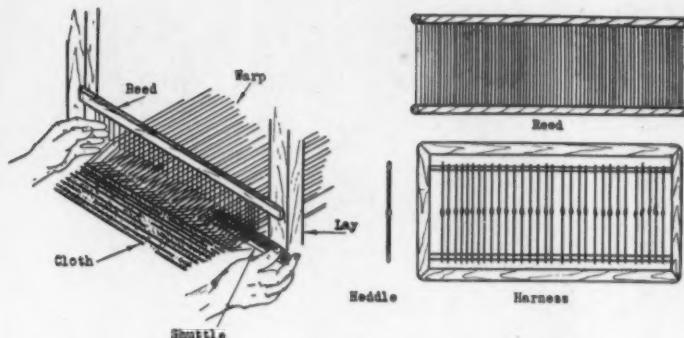
Blankets owe their name to the Flemish weaver Thomas Blanket who, in the severe winter of 1340, used a piece of unshorn, shaggy broadcloth as a cover for his bed. Blankets provide the perfect example of Wool's ability to give light, bulkless warmth. This is due to the millions of air cells entrapped in the fabric, forming one of the best insulators known, and making pure Wool blankets, in a very real sense, as light as air. The nap on a blanket, which holds even more warmth-giving air, is brushed up after the fabric is woven.

WOOL AT PLAY

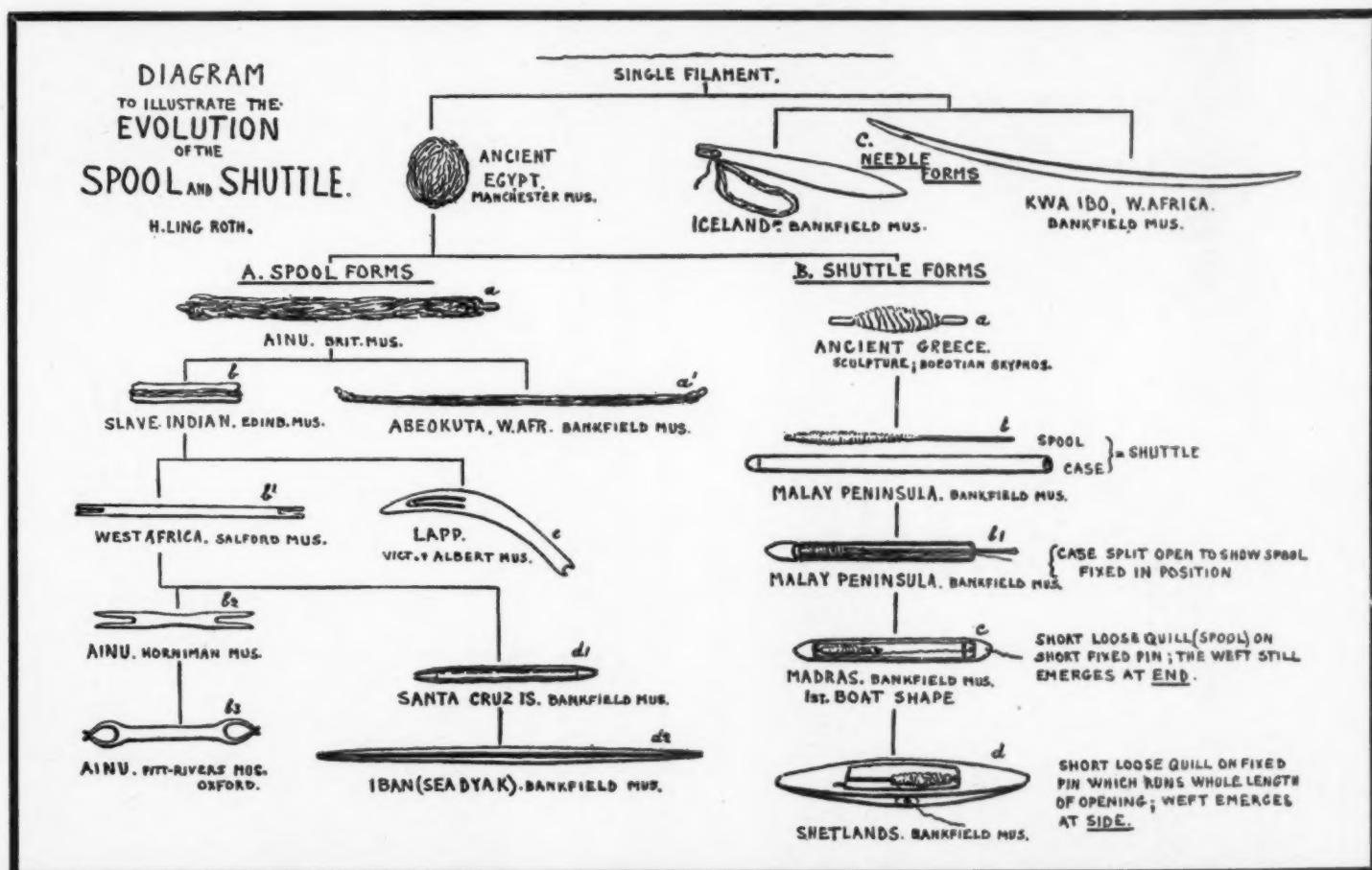
Wool at play is comfortable and healthy because it keeps the skin dry and does not become clammy. Above all, Wool prevents chills by ensuring that cooling-off is slow.



Hand-loom weaving of custom woolens



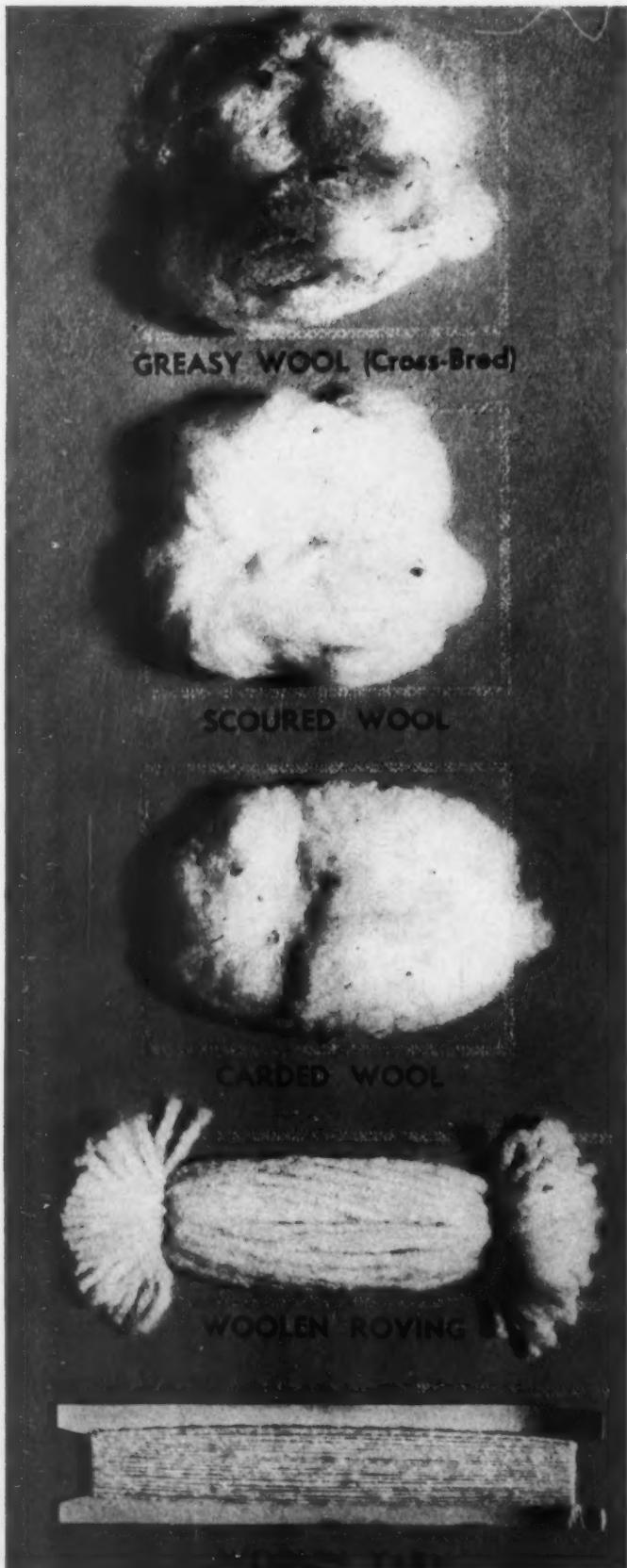
Above are sketches of different parts of a hand loom



TYPES OF IMPORTANT WOOL CLOTH: Left, a Herringbone. Right, a Gun-Club Check



STAGES in the



THE WOOLEN PROCESS

1. *Wool is sorted* into different grades by hand; it takes years of experience to become a good sorter.
2. *Wool is scoured* to remove all dirt and yolk, to prepare the fleece for dyeing.
3. *Wool is dyed* after it has been scoured and dried, in colors which are blended to attain the required shades.
4. *Wool tops are inspected* to ascertain that the wool is of the required quality prior to spinning.
5. *Wool is carded* by a machine which opens the fibers, makes a homogeneous mix, and rolls the fibers into a roving.
6. *Fiber is spun* by drawing out and twisting the fibers in a continuous strain called yarn, which is wound on a bobbin.
7. *Yarn is conditioned* for efficient weaving; all kinks are removed by steam pressure.
8. *Yarn is dressed* by beamng the warp yarn to pattern specifications for color and size.
9. *Yarn is drawn-in* by the operator; each of about 4,200 threads of yarn is drawn through small eyes in wires called heddles which are set in harnesses. The drawing-in is done according to the designer's plan, and the action of each end determines the pattern.
10. *Yarn is woven* by interlacing the yarns running lengthwise in the loom (the warp) with a series of yarns running crosswise (the filling) at true right angles . . . thus making up the basic fabric structure.
11. *Cloth is burled*, which means that all knots, loose threads, and slubs are removed before the finishing process begins.
12. *Cloth is fulled* (or milled) by a process combining heat, moisture, friction and pressure to shrink the cloth considerably in both width and length. The fabric loses its open-weave appearance in this essential operation after weaving.
13. *Cloth is washed* and rinsed to remove all impurities and dirt picked up through the previous operations.
14. *Cloth is dried* and straightened to remove all wrinkles, on a high speed set of over-and-under heated rollers.
15. *Cloth is sheared* on a machine with revolving razor-sharp blades to attain a uniformly even pile or nap.
16. *Cloth is pressed* after being moistened by a dewing machine, by passing through heated rollers.
17. *Cloth is perched*, which means that it is perched on high frames and then closely scrutinized as a final examination.

Some Characteristics of WOOLEN FABRICS

Woolen fabrics generally have a softer feel and fuzzier surface. They have less shine, or sheen. Woolens do not hold a crease well, and tend to sag. Their tensile strength is relatively low. As a rule, woolens use less expensive grade yarns than worsteds. Woolens take a greater depth of color in dyeing. Woolens are generally heavier and bulkier than worsteds. Woolens are more suited to the casual types of fashions.

processing of WOOL

THE WORSTED PROCESS

Up to a certain point, the process for producing worsted fabrics is almost identical with that which results in the production of woolens. The raw wool is sorted, then scoured; it is dyed, and the tops are inspected exactly as in the woolen process. At this point, however . . .

The wool is combed. This process removes foreign matter and noils; it parallels the wool fibers into a uniform staple length to ensure both the purity and the evenness of the yarn which is to be spun in preparation for weaving the cloth.

This step is possibly the most important departure on the road to weaving a worsted cloth, for it is most essential that the fiber be of uniform length in order to attain the twist which is the nub of a worsted cloth. After combing, the wool is carded, and then comes another unique operation:

Packing tops in the dye vat is an operation in which the wool is wound on perforated tubes through which dyes are forced at tremendous pressure in order to set the colors evenly on yarn. This is done only on the worsted system, and so also is the next step in the production of worsted fabrics.

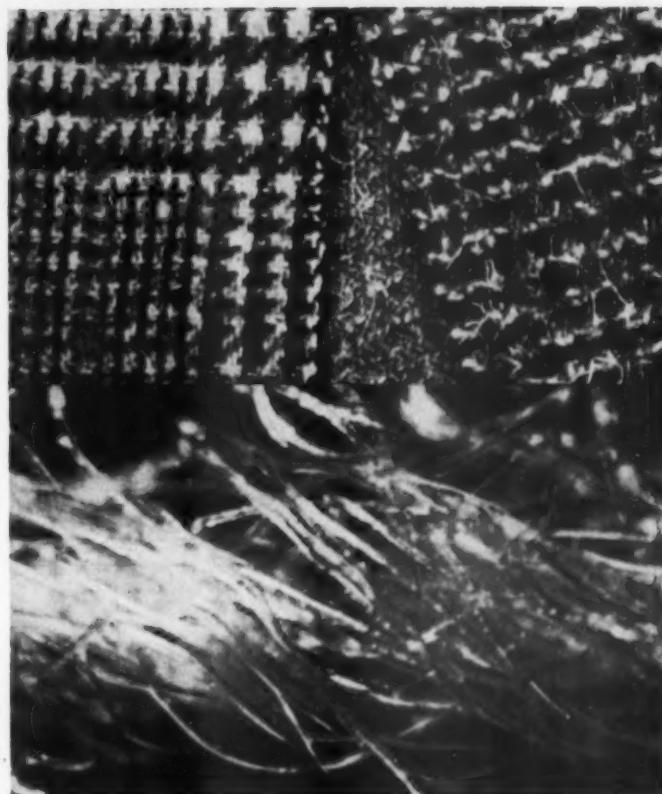
Washing tops after dyeing, to remove any surface or ingrained impurities or extraneous matter. After this step the yarn is spun, conditioned, dressed, drawn-in, woven, burled and fulled exactly as in the case of woolens; then come the final steps of washing, drying, shearing, pressing, and perching the finished worsted fabric.

Several important points differentiate the woolen and worsted systems, as you may have already gathered. For one thing, worsteds are chosen for particular uses where it is desirable to obtain a hard surface finish, greater durability, and sharper colorings. Under the worsted system, the treatment of wool from the raw state to the finished state makes it possible to twist the fibers in such a manner as to create a smoother, harder surface. This is the essential difference between woolens and worsteds; there are other characteristics, but, in essence, it is the ability to twist uniform length yarns prior to the weaving process which paves the way for the worsted cloth.

There is no ground for the common notion that all worsteds are better than all woolens. Actually, a good woolen is a fine and desirable cloth; much more desirable than a poorly woven worsted made of yarns lower in quality than $\frac{3}{8}$. The final determinant is the purpose to which the cloth is to be put; if you know the advantages of each type of cloth, as well as their differences, you can then decide whether you should take the woolen or the worsted.

Some Characteristics of WORSTED FABRICS

Worsted cloths generally have a smoother texture than woolens. They take a shine more easily, because of the twist. Worsted do not sag, and they hold a crease well. Worsted have a greater tensile strength than woolens. Mainly worsteds use a better grade of yarn. Worsted cloth is lighter and less bulky than woolen. It is easier to tailor and drape worsteds. You may expect longer wear from worsted cloth. Worsted are generally higher in cost than woolens.

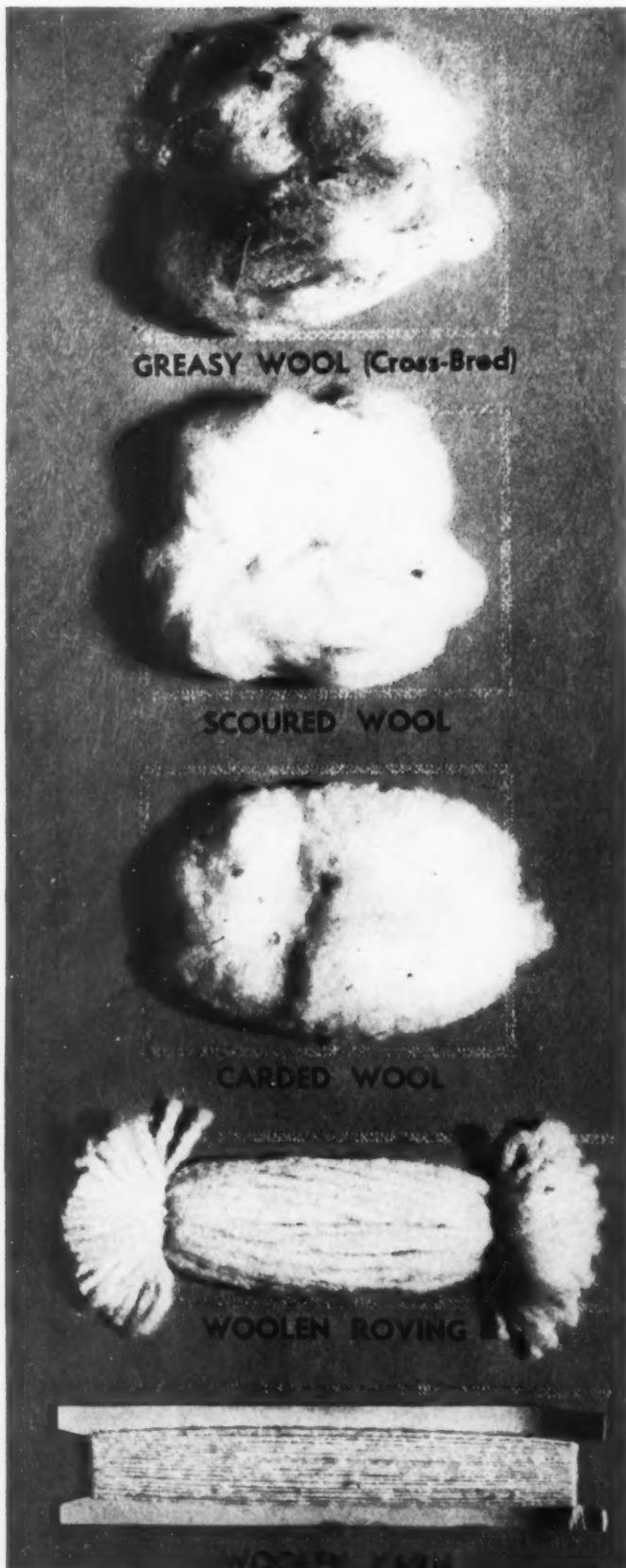


Woolen fabrics with enlarged photograph of woolen thread



Worsted fabrics with enlarged photograph of worsted thread

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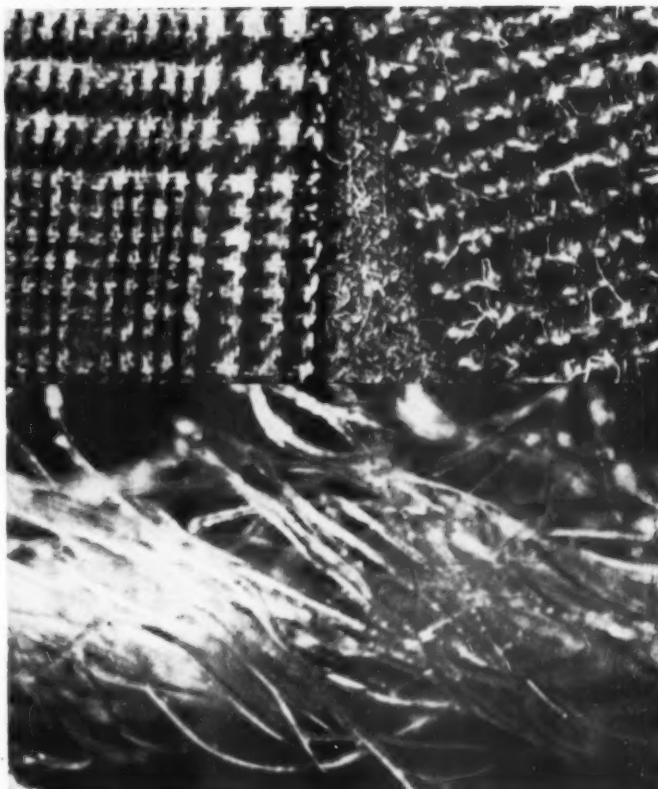
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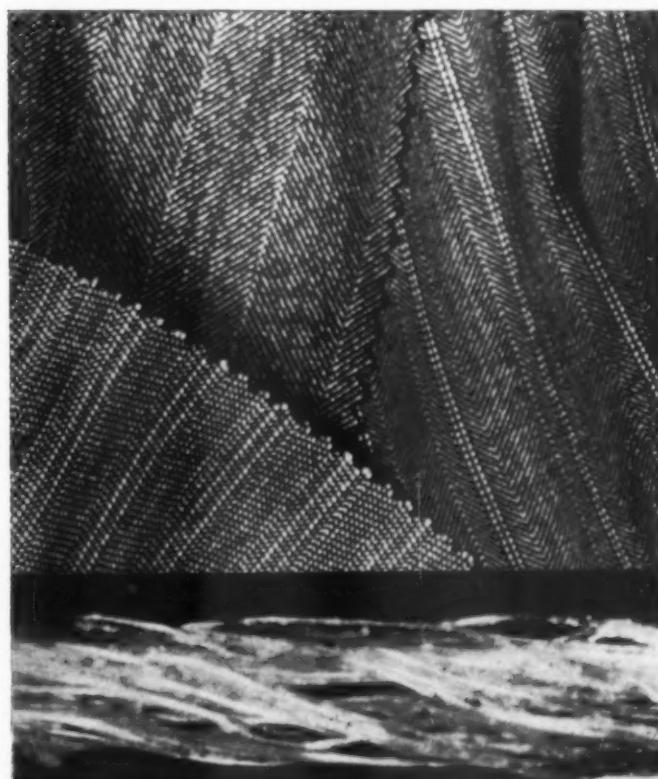
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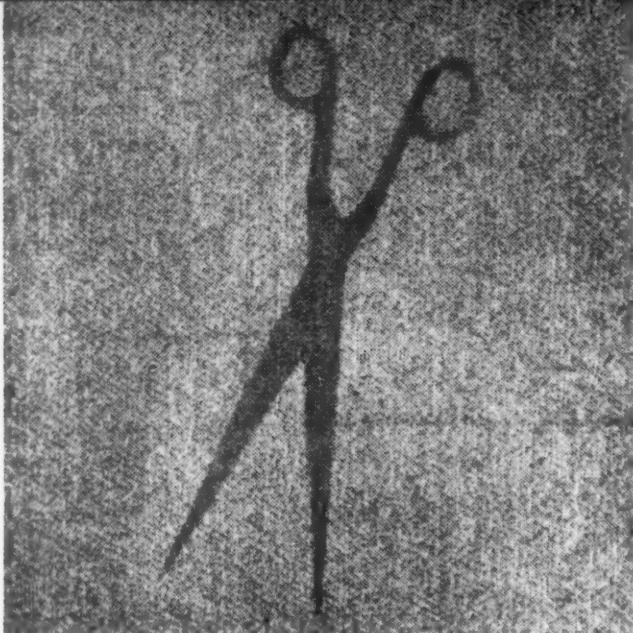
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Woolen fabrics with enlarged photograph of woolen thread



Worsted fabrics with enlarged photograph of worsted thread



EXTENDING THE TWEED CALENDAR

A favorite wool fabric for both men and women finds itself in twelve months' use, due to new techniques.

Demonstrating once more that in the hands of the technologists of the American textile industry there is no limit to what can be done to make fabrics the fountainhead for fashion, the recently introduced 10-11 ounce tweeds may well give our manufacturers and retailers an extra selling season for this perennial fabric favorite.

Hitherto confined to fabrics weighing at least 14 ounces, because they were traditionally woven on the woolen system, a number of these new tweeds are being woven on the worsted system. Thus the rugged-in-appearance tweeds which were previously laid aside with regret when the warmer season approached may now enjoy fashion acceptance right through the calendar year.

This development at once opens up a wide vista for the cutter. It enables the retailers of both men's and women's apparel to keep up a successful selling campaign which should parallel the success which marked the introduction of lighter weight fabrics of other types for warm weather wear. We can visualize the dramatic impact with which stores will announce to the public that the new tweeds are as light and porous as any summer fabric . . . that men and women need no longer bid reluctant farewell to their favorite with the coming of spring. To illustrate the porosity and sheerness of this fabric we have photographed a swatch with a pair of shears in the background.

How well do you know the WOOL PRODUCTS LABELING ACT?

The United States Government Regulations of the Wool Labeling Act of 1939 are given here:

USE OF THE TERM VIRGIN OR NEW: The term *virgin* or *new* as descriptive of a wool product or any fiber or part thereof shall not be used when the product or part so described is not composed wholly of new or virgin wool which has never been used, or reclaimed, reworked, reprocessed or reused from any spun, woven, knitted, felted, or manufactured or used product. Products composed of or made from fiber reworked or reclaimed from yarn or clips shall not be described as virgin wool or new wool, or by similar terms, regardless of whether such yarn or clips are new or used or were made of new, reprocessed or reused material.

THE TERM WOOL: The term *wool* means the fiber from the sheep fleece or from the fleece of the lamb or the hair of the angora or cashmere goat (and may include the so-called specialty fibers from the hair of the camel, alpaca, llama, and vicuna) which has never been reclaimed from a woven or felted product.

THE TERM REPROCESSED WOOL: The term *reprocessed wool* means the resulting fiber when wool has been woven or felted into a wool product which, without ever having been utilized in any way by the ultimate consumer, subsequently was made into a fibrous state.

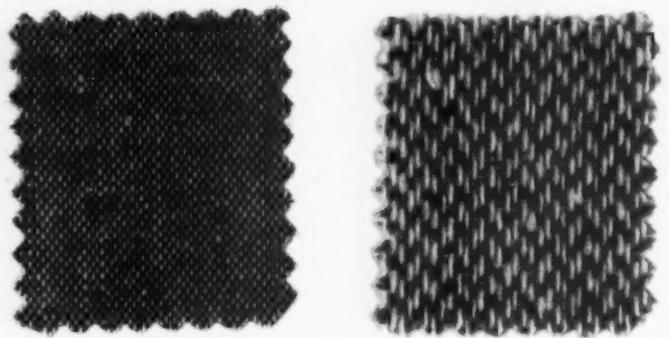
THE TERM REUSED WOOL: The term *reused wool* means the resulting fiber when wool or reprocessed wool has been spun, woven, knitted or felted into a wool product, which, after having been used in any way by the ultimate consumer, subsequently has been made into a fibrous state.

THE TERM WOOL PRODUCT: The term *wool product* means any product, or any portion

of a product, which contains, purports to contain, or in any way is represented as containing wool, reprocessed wool, or reused wool.

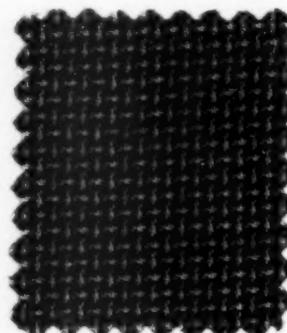
THE TERM ALL WOOL OR ONE HUNDRED PERCENT WOOL: Where the product or the fabric to which the stamp, tag, label, or mark of identification applies is composed wholly of one kind of fiber, either the word *All* or the term *Hundred Percent* may be used with the correct fiber name; as for example, "Hundred-Percent-Wool," "All Wool," "100% Reprocessed Wool," "All Reprocessed Wool," "100% Reused Wool," "All Reused Wool." If any such product is composed wholly of one fiber with the exception of the fiber ornamentation not exceeding five percent, such term *All* or *100%* as qualifying the name of fiber may be used, provided it is immediately followed by a phrase of like meaning; for example:

"All Wool Exclusive of Ornamentation."
or
"100% Wool Exclusive of Ornamentation."

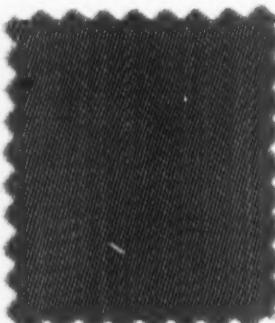


Tropic Weight Donegal Type Tweed by **STRONG HEWAT**

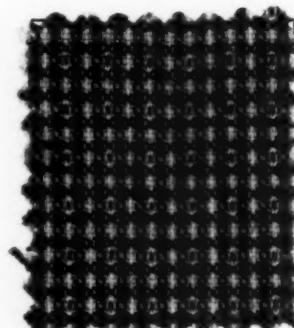
Lightweight All Wool Tweed Coating by **FARNSWORTH**



Natural Lightweight Worsted Suiting by **JUILLIARD**



Mixture Type Sheer of Worsted and Nylon, **BACHMANN UXBRIDGE**



All Worsted Pin Dot Check by **KANMAK**



Wool—Fiber of Integrity

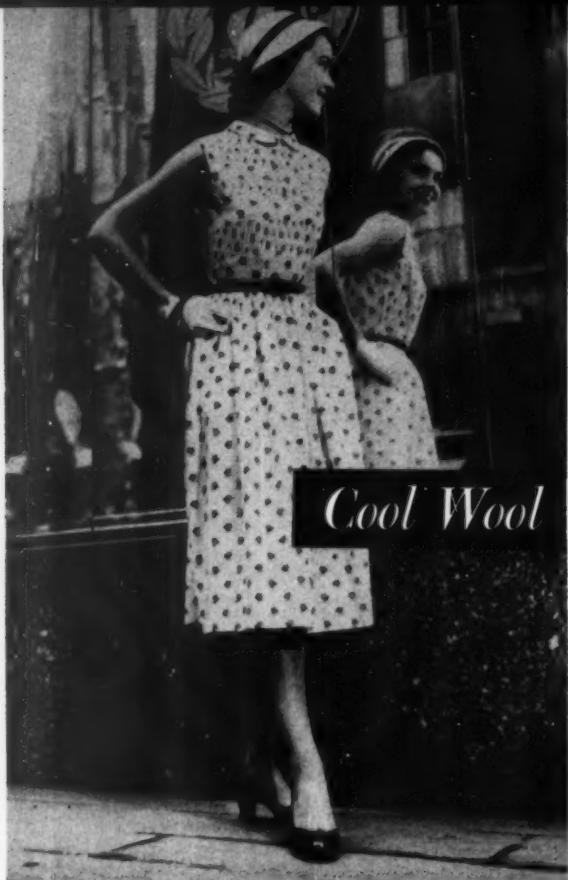
THE WOOL BUREAU

Wool is a miracle of Nature perfected by man in the laboratory of Time. In an age when science is king no one has been able to imitate the exclusive, complex qualities of wool which have made it possible for humanity to defy the grim rigors of earth's worst climates.

Wool is nature's thermostat, adjusting itself to the body's temperature in any climate. No other fiber, natural or synthetic, has the magic absorbency of wool, which is man's greatest protection against heat, cold and dampness. No fiber has wool's resiliency, which is the enemy of wrinkles. No fiber wears as well, or looks as well during its long life under the severest conditions of service.

In addition to all of these qualities which minister to the necessities of man, Wool is a Natural for Fashion! Its textures, its colors—its aesthetic beauty—are unapproached.

The Wool Bureau has the basically simple duty of keeping a busy people informed of these wool facts through scientific and economic research, education and merchandising promotions. It is a proud duty performed with the pleasure which is part of any task rooted in Integrity.



Wool is a natural for Fashion

PEOPLE MOVING about the retail areas in all parts of the country this fall will notice in important stores a promotion which declares that "Wool is a Natural for Fashion." This promotion extends throughout the women's and children's ready-to-wear, accessory and piece goods departments.

"Wool is a Natural for Fashion" is an idea developed by The Wool Bureau with its Women's Wear Advisory Committee. The promotion portfolio presented to 3,000 stores contains window display ideas by Lester Gaba, advertising suggestions, radio scripts, training material, news releases and basic selling themes.

These selling themes are based on wool's supremely distinctive properties of wear, service and beauty, and wool's leadership in fashion. We wish to maintain an innately modest attitude, but

THE WOOL BUREAU knew there was a wide and lively interest in the unexampled qualities of Cool Wool for resort, spring and summer wear when it spread the news of its matchless fashion and practical values. But the Bureau never dreamed that this promotion would be seized upon by merchants, the press, the movies, radio and television as a Great Fashion Event for 1951.

But so it was. American wool textile mills are making tissue thin woolens of ravishing beauty in hundreds of designs and colors. America's leading designers are tailoring them in top-flight fashions which will travel and wear in wrinkle-free, crisp, slim lines from dawn to star-spangled night.

The Wool Bureau, and its efficient Women's Fashion Advisory Committee, are encouraging the fabric designer and the fashion creator to style resort, spring and summer fashions in Cool Wool for 1951. Out of this unbeatable combination retail merchants can build a business which will delight their customers, and which is free from the deadly price competition that is the very hallmark of wool's eager imitators.

the encouraging comments of some of the leading retail merchants of the country lead us to believe we have produced a practical *tour de force* in retail selling ideas which will bring profits to stores and satisfaction to customers.



Women's Wear Advisory Committee

MRS. ELSIE MURPHY
MISS BLANCHARD BARTLETT
MISS ELAINE DUCAS
MRS. ADELIA ELLIS
MRS. GERTRUDE M. HOGAN
MRS. ELEANOR HOWARD
MISS GENEVIEVE HUSS
MRS. KEENE LAMBORN
MISS HELEN MENZEL
MISS JEANNE PIERRE

S. Stroock & Co., Inc., Chairman
Goodall Fabrics, Inc.
De Land & Milridge Woolen Companies
Forstmann Woolen Company
Botany Mills, Inc.
Miron Woolens
Forstmann Woolen Company
Pacific Mills Worsted Division
Hockanum Mills, Inc.
A. D. Juilliard & Company, Inc.

**How to
write more
sales checks
the
WOOL
way**





Good selling (the kind that makes money for you and gives your customers personal satisfaction) includes a lot of common sense and know-how. First, there's the personal interest and special attention you give each customer. And the fashion advice, channeled to you through your store. The rest of sales success hinges on fundamental knowledge of your merchandise.

When you sell wool, that knowledge is doubly important. To the store you work for . . . wool is big business. (We'll wager you'll find some wool merchandise in almost every department of the store!) Even more vital, wool sales constitute an important part of your take-home pay.

With its tradition for excellence and elegance, wool combines virtues that are hard to match . . . and easy to sell. This small booklet is crammed with these wool facts, proven by scientific test, and more important . . . by salespeople on the floor. They are the basis of wool selling success. And we mean success in terms of that important item . . . your salesbook!

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Where there's WOOL there's a way

The fascinating story of the sheep's fleece has threaded through history since the ancient Phoenicians made and traded wool fabrics or Roman soldiers paraded in splendid hand-loomed wool uniforms.

Both the romantic history and the great importance of the wonderful wool fabrics which 20th century technicians have perfected today are due to just one thing . . . the small wool hair, or fiber as it is technically called. Every fabric is as good as the fiber it is made of. *It is never any better.* And the wool fiber has a combination of natural talents that are unmatched.

There is no other fiber as naturally springy and resilient. (So, fabrics of other fibers are treated to resist wrinkles—a talent only wool possesses naturally.) There is no fiber as absorbent as wool. None that protects against both heat and cold. None that dyes more beautifully.

Certainly there is no fiber as versatile! Just think of the hundreds of textures, weights and qualities of wool fabrics we wear from diaper days on. All of them have been designed through the ages to meet humanity's needs or to cater to its love of beauty and luxury.

For instance, most of us stake our winter fashions and comfort on warmth-giving wool. At the sweltering end of the thermometer, science confirms what wool-robed Arabian sheiks have known for centuries . . . versatile wool also keeps us cool! From dense cold-resisting, arctic weight coatings to the sheerest wool voiles, from crisp worsted suitings to luxurious fleece coatings, there is a special wool fabric for almost every clothing use under the sun. From the cradle onward through life, handsome and fashionable wool adorns and protects us in hundreds of different ways. It has many imitators but no equal in its unmatched combination of beauty, comfort and serviceability.



**What
wool
facts
will
persuade
my
customer
to
buy?**

Wool is wrinkle-resistant—

Less pressing is the blessing! It's a scientific fact that wool fibers can be stretched as much as 30%, can be twisted or bent and they still snap back into shape without damage. Resilient and springy, wool fights to stay in position, to get back into shape after creasing. As it absorbs air and moisture, wool straightens out . . . actually refreshes itself. And right here is where wool can practically make a sale for you! Wrinkles spring out of a wool garment simply by hanging it up for 24 hours. (In a dry climate, a little steaming or damp brushing substitutes for natural moisture.) This natural crease resistance and self-pressing virtue never wears off in repeated dry cleanings. The unusual elasticity of wool also explains why wool clothes drape so beautifully, hold their designed lines, and do not readily pull out at the seams.

Wool is absorbent—

More so than any fabric! Wool actually can absorb up to 30% of its own weight in moisture without feeling damp. Scientific percentages don't make sales . . . but comfort does. As the sun shines beamingly . . . wool is sympathetically absorbing. No clammy, damp spots between the shoulder blades on a humid day! No wrinkled mussing . . . wool is refreshed—not depressed by moisture. Health security, too, against chills and colds . . . as wool dries slowly it prevents sudden cooling. A very good reason for wool in damp weather. (Sportswear departments take note . . . wool's absorbency means equal protection for active athletes and inactive bystanders.)

Wool is durable—

As much an investment as a purchase. Full weight coatings and the sheerest cool wool fabrics have the same miraculous combination of resiliency (the seams won't pull out easily) . . . plus toughness. You're one step closer to that salesbook when you stress wool's talent for lasting handsomeness . . . the way wool holds the designed lines and stays fresh looking during its long life.

Wool is insulating—

Keeps you cool or warm at the drop of a thermometer! Wool actually holds an insulating layer of air trapped in and between the crinkly, meshlike fibers of the cloth. Bulk and weight are not necessary to wool's insulation. Cold weather selling is

easier when you stress how lightly wool's warmth sits on your customer's shoulders. Warmth without weight makes music to the ears.

It may never have occurred to you . . . but wool's insulation works just as well in reverse! Arab sheiks wear woolen robes, the Mexicans favor wool serapes or blankets . . . both are protection against extreme heat. And now this age of marvels and miracles has produced special new wool fabrics for spring and summer . . . actually 50% lighter in weight than most of the wool fashions that lured our great-grandmothers. Crisp and non-clinging, these new fabrics are woven with scientifically perfected "cool weaves," using very fine yarns in open porous weaves. And all with wool's built-in air conditioning!

Insulation again pays off in sales dividends if you're helping a woman who is on the wing. As we travel today by air with the speed of sound from north to south, temperature to temperature . . . insulated wool is travel-comfortable from Boston to Buenos Aires to Bangkok.

Wool colors are superb—

Incomparable for richness and lasting beauty. *It's because dye penetrates way into the inner core of the wool fiber . . . becomes an integral part of the wool itself.* Obviously, this is a sure method of getting deep, permanent color . . . and a sure tool of selling strategy. It's a technicolor story to tell, how wool takes all colors equally well . . . inky blacks, brilliant high shades, soft muted pastels . . . and holds on to them!

Wool is comfortable—

Alive and resilient . . . light and soft. It adjusts to the climate, absorbs moisture and allows the body to breathe in the hottest and coldest weather. All in all, it's a *natural* clothing fiber that feels good whenever and wherever you wear it.

And wool is always fashionable!

—Every woman is intrigued by the fascinating weaves, the glorious colors, the unusual textures that wool alone provides in such imaginative variety. This fashion-rightness of wool is one of its most appealing characteristics. And the fastest way to make sales!



Worsted and Woolens

As the sheep stubbornly refuses to grow his wool in fabric form, we have two systems of making his fleece into material: woolen and worsted. Remember, both woolen fabrics and worsted fabrics are wool. Their difference is due mainly to the way wool is spun into yarn.

Worsted are known for their crisp, clear, firm textures. Gabardine, serge and covert are beautiful examples. Many of the new lightweight wool dresses identified by their crisp, sheer feel are also worsteds.

Worsted yarn is spun from fibers which have been carded and meticulously combed (just as we comb our own hair to make it lie parallel). All the short fibers are removed in combing. Then the long, parallel fibers are tightly twisted into a fine, firm yarn.

When you're selling, recommend worsteds as a family with marvelous talents for the most exact tailoring and wrinkle-defying, dirt-resisting surfaces. They are important where crispness and long wear are important.

Woolens, generally speaking, can be identified by their softer touch and their "covered" surface. You recognize them immediately in such fabrics as tweeds, fleeces, velours, soft-finished dress fabrics and broadcloth.

Woolen yarn is spun from shorter fibers, which instead of being parallel, are crisscrossed in every direction. The yarn is more loosely spun than worsted yarn. Wool fabrics are therefore softer, more "woolly" in appearance, and the short protruding fibers are perfect for wonderful surface effects. Feature these textures and finishes . . . the sleekness of broadcloths, the easy elegance and natural finish of tweeds, the downy softness of fleeces. Show your customers how beautifully woolens drape. Be sure they feel the fabric . . . and appreciate its resilient, soft aliveness.

In this age of scientific advance, worsted and woolen yarns are also sometimes combined in weaves to create fashion effects and utility values. The main point to remember in selling fashions in woolens, worsteds or a mixture of the two is to suit the cloth to your customer's need. A soft, spongy material like tweed is obviously not for the woman who wants a permanently crisp and tailored look in her suit or slacks. A firm, hard-finished fabric is not right for the woman who prefers a softly casual effect. By suiting the cloth to the need . . . your customers will receive the maximum in long wear. (Suggested uses for many wool fabrics will be found in the back of this booklet.)

Worsted yarn

Woolen yarn

What is the Wool Labeling Act?

That wool tag on merchandise isn't there by coincidence! It's a law that all products containing wool carry a tag or label telling you the kinds of fibers in the fabric and the percentages of each. "100% wool" or "all wool" on the tag, without other qualifying words, refer to fleece wool used for the first time in the *complete* manufacture of a wool product. "Virgin Wool" is new wool that has *never* been processed in any way previously.

"Reprocessed Wool" contains scraps or remnants of new, unused wool fabrics which were shredded back into fibers and remanufactured. From the scraps of wool fabrics in manufacturers' workrooms and mill ends, Reprocessed Wool is chiefly made. Remember that Reprocessed Wool has never been worn before its use in the present fabric.

The phrase "Re-used Wool" means just what it says . . . wool which has actually been used or worn, such as your old suit and mine. These are reclaimed and remanufactured. Re-used Wool is used mainly in interlinings and mass utility fabrics.

Wool's cousins-in-law

All the specialty fibers are also classed as members of the wool family under the Wool Products Labeling Act. These are used alone or blended with sheep's wool for lightness, beauty and luxurious novelty effects.

Alpaca—Soft lustrous and durable . . . comes from the Alpaca, one of the camel-like animals of the Andes.

Camel Hair—Comes chiefly from the downy undercoat of the Bactrian Camel of China and Mongolia. Good Camel Hair fabric is classic for its year-round versatility.

Cashmere (or Kashmir)—Fine under-hair of the Kashmir goat of the Himalayas. Very soft, strong, and light as air.

Guanaco—Rare and delicate fleece of the Guanaco, a resident of the west coast of South America. Gloriously soft to the touch.

Llama—Soft, insulating undercoat fibers of the Peruvian cameloid animal.

Mohair—From the Angora goat . . . extremely long wearing and lustrous. Kid Mohair is used widely in men's and women's wear.

Vicuna—Lightest and finest of all clothing fibers comes from the Vicuna. Characterized by its luxurious and exquisite beauty.



Wool selling ways and words

Of course no one could cover all the situations that arise in selling wool fashions and fabrics. But there are a few basic fundamentals you can't go wrong on. After you advise your customer on silhouette and fashion detail, emphasize the fashion in the fabric . . . the wonderful weaves, superb textures, the deep dyed and lasting colors. Call the fabric by name if possible . . . tell her how it wears and performs. *Always, yes, always . . . have your customer feel the wool fabric. Get her to admire that naturally alive, luxurious "handle" that makes wool so wonderful to wear . . . and easier to sell.*

If you're selling . . .

a wool crepe "Wool crepes like this are miracles of wear. The fabric is slimming . . . keeps its shape without a lot of care. And the color, rich and beautiful in wool, is so flattering to you."

a dressy wool "This cocktail dress in wool moulds your figure wonderfully. Because wool is so resilient, even if you gain a pound or two, there's little worry about its pulling out at the seams as some fabrics do."

a sheer worsted dressweight "You can wear this sheer right through Spring into Summer. Just feel how light and crisp the fabric is! Porous, absorbent and cool . . . it doesn't get clammy and mussed looking. On a warm day you'll never discover an unattractive damp spot between the shoulder blades because of the humidity."

a worsted suiting like gabardine, tricotine or serge "For long and handsome wear, you can't match a worsted suit. This crisp, 100% worsted fabric is very slimming, holds its shape for years, and doesn't get wrinkled and mussed looking."

a soft tailored suit like flannel or shetland "A suit like this is as much an investment as a purchase. It's classic for fashion. The colors stay fresh and beautiful; the fabric stays springy, soft and comfortable to wear. Its versatility is unlimited."

See pages
16 and 17 for
special Yard
Goods tips

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a casual suiting or coating like tweed or homespun "The weave in this woolen is truly distinctive. Such a springy, soft feel to the fabric, and it will wear for years. The colors are rich, beautifully blended."

a napped coat like fleece "Of course this fleece coat will keep you wonderfully warm. But in addition, just feel how light it is! You'll be snug and comfortable in cold and in wet weather. And always fashionable."

a dressy coating or suiting like broad-cloth or velour "Notice the superb luster of this fabric, how rich and luxurious it is. The way it drapes in such beautiful lines . . . and holds these high fashion lines . . . is marvelous."

For special situations . . .

If she's a business woman "And, of course, this wool fabric is wonderful for business. It stays crisp and fresh all day and through the evening, too. Always looks smart and fashionable. Wool has a natural wrinkle-resistance that it doesn't lose in repeated dry cleanings. Best of all, it wears wonderfully!"

If she's going to travel "By all means take wool when you're travelling . . . you'll get less mussed en route. When you unpack, just steam your wool clothes over the tub. Or brush them with a moistened clothes brush. The wrinkles will fall out . . . saving you dollars and hours in pressing."

"Yes, the right clothes for travel are a problem . . . but wool is so versatile for changing temperatures." Because it's a natural insulator, you'll be at ease despite the weather at take-off or arrival . . . and you'll never feel chilly in air-conditioned trains or planes in between. Wool is so *comfortable* to wear!"

If you're selling to daughter and mother "Your daughter looks charming in this wool suit. The flattering color will stay rich and lovely in wool. And wool is really durable. Her suit will look handsome as long as she cares to wear it."

"This wool coat is so fashionable on your daughter. And she'll always be warm and comfortable in it on rainy, cold days. Wool never feels miserably wet and cold . . . it protects her from chills and colds."



**When
she
says:**

"Will it fade?" "Did you know that wool has a greater affinity for dye than any other fiber? That's why the wool fabrics made by reputable textile manufacturers are famous for their color supremacy . . . and resistance to fading. Under normal conditions, I am sure you will never have any trouble with this fabric's fading."

"Will it wash?" "Our washable wool apparel has a tag attached giving laundering instructions. I'd advise you to put such tags away in a safe place . . . and to follow the instructions carefully every time you launder the garments. However, if garments are not specially marked washable, you should, of course, have them dry cleaned. Wool is such an excellent investment, you want to give it the finest care."

"Will it shrink?" (If marked washable) "Your garment will not shrink if it is carefully laundered according to instructions."

(If not marked washable) "This fashion is not washable but it will dry clean beautifully. Of course, you know you should have your fine wool clothes cleaned and pressed only by a reliable cleaner."

(In yard goods) "Unless the fabric is marked pre-shrunk or ready-for-the-needle, you should have it sponged before cutting by a really good professional dry cleaner or tailor."

"The price is high." "This fabric is 100% wool. It's a quality investment in the way it wears, and stays handsome over a long period of time. You buy this *permanent* beauty, line and color. When you consider these points, you realize that wool is much more economical than a lower priced garment which won't return nearly as much value in beauty or in service."

"Will it stretch or get saggy?" "Wool fabrics hold their shapes exceptionally well, if the garment is correctly fitted and taken care of properly. And actually, wool clothes require as little or less care than any others." (Then give her the special care tips for her particular wool material . . . you'll find them on pages 12 and 13.)

What do they mean?

There's a constant flurry of confusion about many phrases used in advertising and promoting wool. Customers frequently ask "What is a yarn-dyed fabric?" "What does tissue-weight wool mean?" Here are the answers to some of these questions that stump customers.

To achieve the desired decorative effect, different dye methods are used on various wool fabrics:

Wool-dyed means that the wool fiber is dyed before it is even spun into yarn. Light and dark fibers are blended together in spinning the yarn, giving a patternless, mixed tone effect as in most London grey flannels. It is often called yarn dye.

Yarn dye properly covers those patterned wool fabrics in which the yarns themselves have been dyed before weaving. Tweeds, plaids, and checked fabrics illustrate how a distinct pattern is achieved by yarn dye.

Piece dyeing, which means that the cloth is dyed after it is woven, is the usual dye method for solid color fabrics. It gives a clear, even color.

Cross dyeing, when applied to wool, explains those light colored fabrics with a muted but distinct pattern in a darker shade. For instance, a brown and white fabric may be dyed pink after it is woven. The resultant fabric will show a subtle pink and brown pattern, with less contrast in colors than a yarn dyed fabric.

Two ply, three ply, etc. are terms we hear much of these days. These mean simply that two or more yarns have been twisted together before weaving . . . to add strength or to obtain a surface effect in weaving and finishing the fabric.

Tissue, chiffon or wafer-weight refer to the extremely light-weight wool fabrics. In the past 25 years, wool fabrics have been woven lighter and sheerer until now these very crisp cool fabrics can be worn the year around. As a comparison, most dress-weight wools of the past weighed 10 to 12 ounces or more per yard. Now they are woven to a sheer 7 ounces or even less . . . a valuable tip to pass on to the customer who says she "can't wear wool in warm weather."



Cutting down complaints and returns

Many a complaint is bred because the customer doesn't know the whys and wherefores of caring for the dress, suit, coat or piece goods she's bought. Wool fabrics actually take very little care, but the special texture or finish of certain fabrics asks for just a little thoughtfulness. If you tell your customers *in advance* how to prevent nap from rubbing off fleece, how to prevent shine on worsteds, how to care for tweeds and jersey . . . there'll be a mutual admiration society between you and your buyer for cutting down complaints and returns!

If she buys a crisp, hard-finished worsted . . . like a gabardine, a serge or a tropical worsted . . . you can make her even happier after the sale by telling her how the fabric is one of the most durable she could select, how it always looks trim and trim. And then, just as positively, advise her *not* to provoke her worsted into shiny ways. There's really no need for it! The business woman particularly should be tipped off to keep a cushion on her office chair to foil friction and shine. Tell all your worsted customers to have their garments cleaned by *good* dry cleaners . . . and to insist that they hand press them. Tell her once, twice and three times, if necessary, that *improper pressing puts more shine on a worsted than hard wear.*

If a fleece, or other pile or napped fabric closes the sale . . . emphasize the wonderful lightness and softness of the fabric, its drapability, and important fashion appeal. Follow it up with the kind counsel that such de-napping tactics as constantly resting her elbow on the car window while driving should be avoided. Under-arm handbags wear off nap, too. A scarf is an attractive neckline saver. Do be sure your fleece garments in stock are not trimmed with sharp or rough buttons that will wear out the buttonholes. Your buyer will want to have such buttons changed. Of course, a sharp metal clasp on a pocketbook also can cause havoc. And tell the lady how napped fabrics preen with beauty after proper brushing!

If she chooses a tweed or loosely woven wool . . . laud the magnificent texture and handsome weave of this apple of her eye. Tell her, too, how these fabrics deserve a soft-bristled clothes brush. Never use whiskbrooms! Steaming is a beauty boon to tweeds. (It's easily done by hanging them over a bathtub of warm water.) Steaming keeps them in shape . . . resilient

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and alive. Her tweeds won't sag or stretch if she rests them properly, at least 24 hours between wearings. And again . . . she should beware of the sharp metal clasp on a purse.

If a wool jersey brings out your salesbook . . . you can increase her delight by explaining how wool jersey leads an almost unwrinkled existence. Tell her jersey dresses should be hung folded at the waist over a hanger to prevent stretching. If she plans to wear her jersey garment infrequently, it should be laid in a long drawer or box. When she takes it out again, a 24-hour rest on the hanger or a light steaming will remove practically all the wrinkles.

And in general . . . These ideas for your own use . . . for all wools . . . and for passing on to your customer. Wield a soft, firm-bristled clothes brush after each wearing. Dirt in a garment actually makes it wear out. See that you have the proper hangers to fit your clothes . . . shaped wooden hangers for suit jackets, skirt presses for skirts, etc. And never hang wool clothes too closely together in the closet.

If you rotate your wool clothes they'll wear longer. Wool is a natural fiber, regains its shape . . . rejuvenates itself . . . with a 24-hour rest. Too frequent pressing and cleaning take the life out of any wool fabric. Incidentally, remember that *poor dry cleaning and pressing are harder on wool than all the wear in the world.*

Make sure stains are treated promptly . . . if you're not able to handle them at home, tell the cleaner what caused the stain. If your clothes get wet, dry them away from the heat . . . brush them after they're dry again. Air all your wool clothes once a month if possible. Leave your closet door open to air your wardrobe at night.

When you store wools don't forget: 1. The clothes must be spotlessly clean. 2. Use moth preventives liberally. 3. Seal the openings of that storage box, bag, cedar chest or closet with gummed tape so that absolutely no air can get in.

P.S. If you (or your customer) have trouble with "water-spotting," try to find out if it was clean or dirty water that caused the spotting. A good dry cleaning will probably remove the spots if the water was dirty. If you spilled clean water, steam pressing usually solves the problem . . . or just steam the garment. It's amazing what this will do for wool.



Consider the customer

A good salesperson needs great understanding . . . plus patience and then more patience. And although the psychology of selling is old hat to most of you . . . a refresher on the subject is never harmful!

When you're selling wool (and everything else!) the first thing to realize is that whether a customer looks like a Vogue cover illustration or a tired, dowdy housewife . . . she feels she has the most important problem in the world. She wants help and advice. You are the only one who can help her. If she's mousy and dull, the more anxious she may be to improve her appearance . . . the easier to sell. *In other words, treat each customer alike . . . with the interest and helpfulness that make her feel really important and interesting.*

The best way to begin a sale is to figure out what brought this woman into the store. Is she buying for a special occasion? Is she a fashionable woman of means? Is cost a predominant factor? Remember no one goes into a store determined to spend a fixed sum. Most of us buy in a price range . . . with a \$5.00, \$10.00 or even \$20.00 spread between minimum and maximum. *A good salesperson will try to determine the maximum and present merchandise to justify that price.*

The same good salesperson will go one step further and judge her customer's taste by what she's wearing. Perhaps she's the casually tailored type . . . or maybe she selects fashions that are understated but finely detailed. Or, she may prefer a bit of drama in her fashion. With this Sherlock Holmes deduction and *by quickly selecting the most becoming, the most appropriate models for each customer . . . you're dollars and minutes ahead on the sale.*



Salespeople in a big store or even in a little store are too busy in many cases to know their customers by name. *A smart salesperson will make every effort to learn her customer's name as soon as she can after greeting her. The name of any married woman, particularly if she is proud of her husband, is the proudest title she knows.*

Every good salesperson must know her merchandise and must be enthusiastic about it. The customer will value the merchandise for its fashion qualities, its beauty in line, and color. *But your enthusiasm over what you have to sell is really the barometer of your customer's appreciation.*

Check

list

of

the

experts

If she said she's "just looking" — Rejoin her just as soon as she shows any interest. Arouse her attention with a specific wool opening, such as, "This dress is one of our new tissue-weight tweeds."

Personalize your approach — Always . . . always! When a woman buys wool merchandise she's making a major personal investment. So, slant your conversation to how the color suits *her*, how the lines flatter *her* . . . how the fabric answers *her* needs and problems . . . and how well it will wear.

Point out the fashion features — Start with the label in the garment, whether it's a designer label, a textile manufacturer's label or your own store label. That label represents pride in the merchandise . . . and fashion significance. Back up the individual style points in the merchandise with the latest information your store passes on to you . . . "This silhouette is shown in *Vogue*." "The cut of this suit is featured by our top American designers."

Get the customer to say "yes" on little things — That the fit is beautiful, the color is becoming, that the fabric is virgin wool. It makes the final closing easier.

If you're stuck, call for help — It happens to the best of us! So don't be ashamed to say to the customer, "I'd like you to meet our buyer, I'm sure she can tell you what you want to know." It makes the customer feel she is someone special.

For the out-of-place male — Show mercy . . . put him at ease. When his wife brings him shopping, find him a seat that's not the center of attraction. Or show him into a dressing room with his wife . . . present the clothes in there. He'll feel less self-conscious. Leave them alone to make the final decision, to give him a chance to express himself while the clothes are being bought.

Follow up that sale — *The salespeople who walk off with the biggest take-home pay are those who build a personal following.* Enter your customers' names, addresses and phone numbers in your customers' book with the date, the purchase, and any unusual facts. Try to memorize the names so you can greet repeat customers by name. Phone your especially good customers or send them an occasional card calling attention to something they'd particularly like. Don't forget to mention her previous purchase; she'll be flattered to be remembered. And you'll be dollars ahead from the little effort it takes to develop a following.

When you're selling yard goods

All of the wool selling ideas in the previous pages add up in *your salesbook*, too. Your customer is just as anxious (or more so!) to know the facts about the fabric she is buying . . . what to expect in performance and ease of sewing. Be sure to tell your needle and scissors artists. . . .

Wool fabrics wear long and handsomely . . . are naturally wrinkle-resistant . . . always healthy and comfortable to wear.

Encourage her dressmaking talents with the facts that—

Pure wool fabrics lie flat for pattern cutting, fitting and sewing—are easier to handle. . . . Pleats and tucks stay in place. . . . Chalk marks brush out of wool easily. . . . Seams don't pucker, stretch or slip in stitching. . . . Sleeve and detail fullness can be more readily eased and steamed into place in wool. . . . And even a very simple pattern achieves a "custom look" when made in wool.

For Bigger and Better Sales

Fashion and Fabric Advice—persuade your undecided customer with the news that her fabric is featured in fashion magazines and by important designers. Encourage her to talk with your Fashion Consultant, if you have one in the department. Get her to feel the wool fabric . . . to appreciate its resilient, alive "handle." Crush the fabric in your hand; ask her to observe how it springs back into its original shape. Interest her in the crispness of wrinkle-shedding worsteds, the soft textures of woolens.

Multiple sales—Suggest coordinated garments she can make. Show a matching or complementary fabric for a blouse, jacket, coat, etc., to go with the fabric she has just selected. Encourage her to make a matching hat, bag or gloves . . . let her know that patterns are available for all of these. And don't forget her family . . . be sure to recommend wool fabrics she'll also want for her children's wardrobe.

Accessories—Advise her to purchase linings, muslin, thread, zippers, bias binding, hem tape and buttons when she buys the fabric.

The right fabric—Encourage your customer to buy the right weight of wool fabric so she won't be disappointed by the skirt she made out of a coat weight or some other avoidable error. And if she asks, wool fabrics come in the following categories (weights of one yard of fabric 53"-56" wide):

Blouse and dress weights—3 to 9 ounces

Skirt weights—7 to 11 ounces

Suitings—9 to 12 ounces

Coatings—12 ounces or over



A

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advisor

reaps a

customer

following

A ripe prospect for repeat sales is the inexperienced sewer. If she has a worried glint in her eye, professional advice will bring her back for more of your brand of helpfulness.

How many yards? . . . The surest guide is the pattern. If she doesn't use one and you're new at this job, ask the buyer or the pattern department. Or refer her to any pattern catalog, which will give yardage needed for styles similar to hers.

Extra yardage . . . is always necessary if your customer has to match a plaid or a patterned fabric or is using napped material. If the pattern doesn't specify, here's a rule of thumb — a plaid needs an extra $\frac{1}{2}$ yard for matching. A stripe requires $\frac{1}{8}$ to $\frac{1}{4}$ yard extra. Napped fabrics need at least $\frac{1}{8}$ to $\frac{1}{2}$ yard additional. An extremely tall woman will also want a few extra inches for length.

Pre-shrinking . . . If the wool fabric you're selling is not marked pre-shrunk or ready-for-the-needle, advise your customer to have it sponged by her tailor or dry cleaner. The home-grown variety of shrinkage is frequently not as satisfactory as the professional.

Thread . . . sheer wools can be stitched with Silk A or B Size 60 to 80 cotton, or mercerized thread. Medium weight wools take Silk B, Size 50-70 cotton or mercerized. Heavier weights, such as coatings, take Silk C, Size 30 to 40 cotton or mercerized thread.

Cutting . . . most of the worsted fabrics like gabardine can be cut with pinking shears. Softer or more loosely woven wools should be cut with regular shears and the seams overcast or bound. She may also need the reminder that when she's cutting a pile or napped fabric, the pile or nap in all pieces should go in the same direction.

Wool jersey . . . remind her that before cutting she should run a basting thread down one of the ribs of the fabric . . . and that she must follow this straight of the goods in cutting jersey as any other fabric. If the crosswise grain is not at right angles to the basting thread, she can gently pull on the bias to bring the crosswise grain to right angles.

Hang the garment . . . for a day before turning up the hem. Wool jersey or a bias cut skirt should be hung for at least 48 hours before hemming.

Please don't overlook the other pages in this booklet. Though they may refer to a ready-to-wear garment rather than yard goods . . . each of these sales tips is translatable into greater selling success for you!

In

the
children's
shop

When you're selling to mothers, wool has a dramatic story because its absorbency and insulation make it healthful for young 'uns to wear.

Wool prevents chills—Mothers worry constantly as children go from racing play to a sudden stop. Hot and sticky . . . they're liable to cool off too suddenly. More than any other fabric, wool protects them. It absorbs moisture and actually gives off heat while it is getting wet. Because of this and because of wool's great insulating talent, it helps maintain even body temperature . . . lessens greatly any risk of chills every season of the year. And for winter wear, wool-lined playsuits and all-wool clothes are vital safeguards.

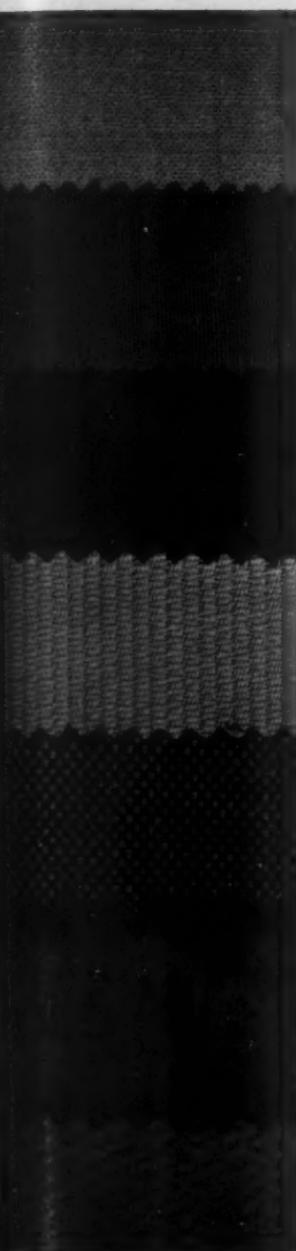
It gives room for non-stop action—Wool's great springiness gives with enthusiastic play . . . and rough tumbling. And wool comes back to shape after being twisted, crushed or generally abused.

Wool's durability is equalled only by a child's. Maybe it's not as wear-proof as a steel suit of armour, but it takes an extraordinary amount of punishment! Because wool fibers are supple and strong . . . they don't break easily with the hard wear they receive from youngsters.

Less pressing is the boon of wool to any busy mother. Constant ironing isn't necessary after junior returns from a wrinkling, jostling match or blissfully hangs his jacket on the floor. Be sure to tell your customers how wrinkles fall out of wool with 24 hours' rest on a hanger or by steaming those particularly mistreated junior editions.

Flame resistance in children's clothing is a serious consideration. With wool, which is the most naturally flame resistant of fabrics, there is little danger of clothes suddenly flaring up. If fire is applied to wool, it ignites slowly. When the flame is removed, wool smolders and goes out . . . it doesn't flare up in a sudden dangerous flame.

Well-known Wool Fabrics



Albatross—In wool: soft, sheer material of plain weave with crepe-like texture and very lightly napped surface. Chiefly used for dresses, negligees, infants' wear, nuns' habits and blouses.

Alpaca—Varied types of coatings, suitings and dress fabrics are made from the fleece of the Alpaca, mainly combined with wool. All are characterized by their luster and durability. Pictured here is a plain weave dress fabric.

Barathea—Fine-textured worsted fabric with an indistinct diagonal weave and slightly pebbled surface. For women's suits or dresses, this high-quality fabric is particularly desirable.

Bedford Cord—Vertically ribbed, sturdy cloth. Used for suits, coats; also for uniforms and riding clothes because of its great durability.

Birdseye—In wool: a smooth-finished worsted fabric distinguished by distinct weave pattern of small diamond-shaped figures having a dot in the center of each. Fine quality suiting.

Blanket Cloth—Heavyweight woolen overcoating with a soft, raised finish.

Bolivia—Pile suiting or coating fabric with soft, velvety feel. The pile is frequently arranged in vertical or diagonal lines.



Bouclé—Wool fabric which may be knitted or woven. Characterized by nubby surfaces of looped yarns. In coat, suit or dress weights.

Broadcloth—A smooth, rich-looking woolen fabric with smooth napped face and flat diagonal weave back. Its silky gloss makes it one of the most widely used of "dressy" fabrics for women's coats, suits and dresses.

Camel Hair—Good grades of camel hair fabric are made of the soft undercoat of the camel. Of fleece or tweed construction, the fabric may have either a rich nap or a flat finish. Often combined with wool. It is used for women's and men's coats, sports jackets.

Cashmere (or Kashmir)—From soft fleece of the Kashmir goat. Either knitted (as in sweaters) or woven (as in coatings, suitings or dress fabrics) cashmere is famed for its soft downy finish, its silky touch. It is frequently blended with sheep's wool.

Challis—Very lightweight sheer wool fabric, ideal for dress fabrics, infants' wear, neckties, etc. Widely used in solid colors. Also popular in dainty flower prints and bolder "necktie" patterns.

Cheviot—A rugged, wool fabric in the tweed family with a characteristic rough surface. Used as a suiting or topcoating and for sportswear; popular for long, hard wear. Will not get shiny because of rough surface.

Chinchilla Cloth—Durable coating with a nap that is rolled into little tufts or nubs. In heavy or medium weights, it is used widely for women's, men's and children's coats.

Covert—A medium-weight, closely woven fabric generally used in men's and women's suits and coats, and other outdoor type garments. Resistant to soil and very durable. Has flecked appearance because one of the yarns is lighter than the other.

Crepe—Dress fabrics of crepe weave, generally distinguished by crinkly surface. May also have soft, mossy finish. In wool, crepes are made in many weights; have exceptional wearing qualities. Used for women's wear, dresses, blouses.

Double-Face Fabric—(or Double Cloth) A heavy compound fabric in which a face cloth and back cloth are combined in weaving. Frequently face and back are contrasting. Used for coats. Swatch shown has a solid color back.

Duvetyn—A short-napped woolen fabric characterized by a smooth, velvet-like texture. Weave is not visible due to raised surface. Wears well, good draping effect and soft to the touch. Used in coats and suits.

Eponge—Soft, loosely-woven, nubby woolen fabric with interesting irregular texture and spongy feel. Fine quality. Also known as ratine. Used chiefly in women's dresses, lightweight coats, suitable also for children's garments.

Flannel—Classic material made in both woolen and worsted with soft, slightly napped surface which makes it pleasant to the touch. Diverse in weight and usage. Popular in women's dresses, coats and suits for both men and women. Also favored for children's and infants' wear.

Fleece—Fabric with deep, soft nap or pile. Desirable where warmth without weight is a factor. Particularly well suited for men's, women's and children's coats.

Gabardine—A clear-finished, closely woven worsted material. Has a fine diagonal weave on face. Wool gabardine resists wrinkling and wears excellently. Recommended for women's dresses, suits, coats, sportswear, uniforms, and men's wear.

Homespun—Loosely woven, rugged fabric that has tweedy appearance obtained by using unevenly spun yarns. Used primarily for sportswear, also in women's dresses, coats, men's suits.



Hopsacking—Rough, open basketweave fabric. Used in sportswear and for dresses, jackets.

Jersey—A plain knit fabric with thin ribs on one side. Very elastic and pliable. May be of woolen or worsted yarns. Used for lingerie, dresses, blouses, sport shirts, gloves, bathing suits.

Melton—Smooth, heavy felted woolen fabric. No nap. Wind resistant. Used by the U. S. Navy for sailors' jackets, also for overcoats, jackets, uniforms and riding habits because of its serviceability for outerwear.

Men's Wear Worsteds—100% worsted fabrics, clear-finished and characterized by talent for fine tailoring and long wear. Now also popular in women's wear. Patterns vary widely—checks, stripes, shark-skin weaves, etc. in coat, suit or dress weights.

Rep—Characterized by distinct crosswise ribs, wool rep is known for its gentle luster and long-wearing qualities. Is used in women's suits and coats. Also spelled repp.

Saxony—A well-finished woolen or worsted cloth with lightly napped surface; very soft feeling. Made from wool raised in Saxony, Germany. Used for coats and suits.

Serge—Classic and durable worsted suiting fabric with diagonal rib prominent on both sides. Smooth finish; made in many different weights and qualities for different uses, such as coats, suits, uniforms, upholstery.

Sharkskin—In wool, a high-grade, clear-finished worsted fabric, often characterized by small woven dots of white on a colored ground. Gives excellent wear and sheds dirt readily. Used for both men's and women's wear, particularly suits.



Sheer Dress-Weights—Any very lightweight woolen or worsted fabric in various weaves, often weighing 7 ounces or less. For warm weather, worsted sheers are woven in open, porous weaves giving a cool, crisp feel to the fabric. Non-clinging, wrinkle-resistant and absorbent in humid weather.

Shetland—Raised finish fabric with soft hand. Must be made from the soft, fine wools of Shetland Island sheep. Used for coats and suits. "Shetland Type" woolen cloths are also sold. They are made with soft hand and shaggy finish of protruding fibers.

Suede—In wool: woven or knitted soft fabric finished to resemble suede leather. Short, close nap gives a soft, smooth hand. Used for women's and children's coatings, suiting and sports clothes.

Textured Worsteds—Clear-finished worsteds in various novelty weaves for texture interest, such as corded weave, diagonal weave, etc. Prominent in suiting and coatings.

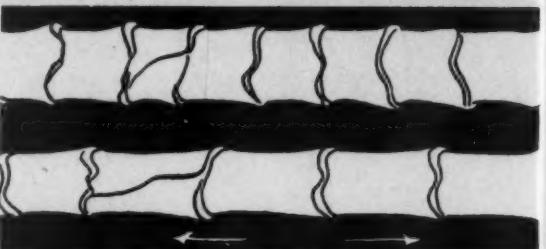
Tricotine—Characterized by distinct, double diagonal lines. Tricotine is in the family of gabardines and coverts. Excellent for wearing qualities. Used chiefly for suits, coatings and uniforms. Also called cavalry twill.

Tropical Worsteds—Lightweight, clear-finished, 100% worsted suiting fabrics of 9 to 10½ ounces in varied novelty weaves. Yarns are tightly twisted and cloth is woven to permit free circulation of air. Very popular in summer suits for both men and women.

Tweed—Sturdy woolen fabric having a rather rough surface, often nubby. Woven in monotones or multi-colored effects, and in patterns such as checks and plaids. Durable and does not shine easily. Traditional for suiting and coatings; now also woven in very light weights for dresses.

Voile—In wool, very sheer, plain-weave wool fabric having a crisp feel. Made from tightly twisted, yarns and light in weight. Used in dresses, blouses.

#1 Outside view of
a wool fiber
relaxed
stretched



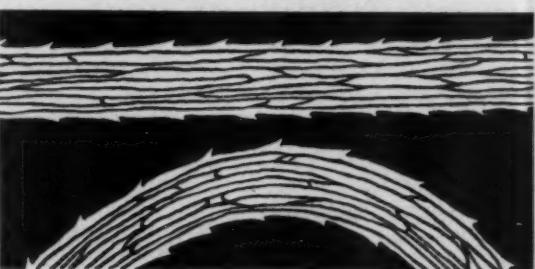
Because these days it's hard to distinguish between fact and fiction, we show you the scientist's view of the wool fiber . . . and how its wonders work. Inside each fiber are countless tiny cells. The outer skin is a thin, protective covering similar to the scales of a fish. Drawing #1 shows how the outer scales move out and back like the meshes of a bracelet. Stretch a wool fiber . . . as much as 30%. Let go, and it springs back to its original measurement.

We split the fiber in drawing #2 to give you the inside story on how the cells within the fiber shift about. It can be twisted, pulled or bent without becoming deformed. Because of this great resiliency wool is wrinkle-resistant and durable.

Notice again in these drawings the little scale-like edges on the outside of the fiber. And then imagine the tight interlocking of millions of these scales in the fabric. This property of interlocking of the fibers, which no other fiber possesses, is the chief reason why so many hundreds of textures, weights and finishes can be made in wool.

Wool's unique insulation against both heat and cold is due to the many minute air spaces trapped in and between the thousands of wool fibers. This trapped layer of air is held around the body . . . creating wool's natural air conditioning. All of which is to give you facts . . . not fiction . . . about wool. Wool's unique construction is the basis of its incomparable beauty and serviceability . . . and the reason why you may sell more wool with complete assurance.

#2 A wool fiber
split lengthwise
relaxed
bent



THE WOOL BUREAU, INCORPORATED
Printed in U.S.A.
First Printing 5-48

16 West 46th Street, New York, N.Y.

IN SELLING TO WOMEN...fashion is the emotional appeal. But many salespeople are simply not aware of the exclusive, essential properties of wool which add a "plus" to their fashion story. Wool-informed salespeople make more sales, more profit for their store, and more take-home pay for themselves. Because stores throughout the country asked for training aids to help build their store volume...the Wool Bureau has prepared a complete wool training package.

Prepared under the auspices of its Women's Advisory Committee, the training material is designed for all women's and children's ready-to-wear and yard goods departments. It contains a maximum of on-the-floor selling ideas...a minimum of rarely-remembered technical data. Training Instructors, Buyers or Merchandise Managers find it simple to present...flexible for use in any training system.

Training Directors are delighted that all the Wool Bureau training material follows the time-honored educational theory, "Tell 'em the important facts...tell 'em again...and then tell 'em you've told 'em!"



The wool training material includes:

- *"How to write more saleschecks...The WOOL Way,"* a 24-page manual of wool selling facts, selling words, tips on how to cut down complaints, and fabric identification.
- 14-page easeled flip chart (26" x 36")—Cartoons tell the wool selling story in color and with humor.
- A teacher's outline—for the expert educator.
- Prepared training lectures—for the teacher less experienced in textiles.
- A follow-up quiz and wool skit show—to encourage class participation.

Needless to say, we're proud to report that among the many important stores using this just-completed material are Julius Garfinckel & Company, Washington; Higbee Company, Cleveland; Joseph Horne Company, Pittsburgh; J. L. Hudson Company, Detroit; F. R. Lazarus Company, Columbus; Macy's, New York and San Francisco; The May Company, Los Angeles; Neiman-Marcus Co., Dallas; H. & S. Pogue Company, Cincinnati; Rich's Inc., Atlanta; Woodward & Lothrop, Washington.

THERE IS NO SUBSTITUTE FOR WOOL

How to write more sales-checks the Wool Way



IN THIS NATION of giant industries the manufacture and sale of men's wool clothing is Big Business. The success or failure of the industry from production of the fabrics to the final retail sale depends more and more today upon informed selling.

For some reason, skilled salesmanship—and the easy courtesy of friendliness—have become the exception rather than the rule in too many men's wear retail stores. The Wool Bureau, with the aid of what is undoubtedly the most representative group of clothing manufacturers which ever set itself to this task, decided to do something about the situation.

The result is a Men's Wear Sales Training Course based on responses by 5,000 experienced men's clothing salesmen to questions which asked them what **WOOL FACTS** would make them better salesmen, both on their own behalf and that of the stores which employed them.

Comprising the course are the Men's Wear Sales Training Manual, which integrates these tested selling ideas into a highly readable, informative booklet, and the Men's Wear Flip Chart, in which the manual's most telling points are emphasized in colorful pictures and brief text.

How to sell more wool clothing

Besides stressing the seven wonders of wool, the Flip Chart tells in the words of experts how to sell wool clothing directly to the public—and how to capitalize on the increasingly important influence of feminine members of the family.

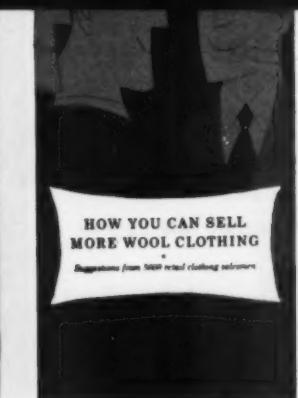
Salespersons are reminded that one sale of a suit or coat represents thirty-three years of handkerchief purchases, six years of underwear purchases, eleven years of necktie purchases and twelve years of glove purchases! Truly a market worth cultivating with the expert finesse that befits its importance.

The right suit pays
Sales Dividends!

Don't sell your customer a pattern or color which accentuates the oddities of his shape. Don't try to stuff a man into a 40 when he needs a 42.

Don't fear the fitter

No sale is made until the fitter is called. A good fitter should be a clothes physician. He should never let a customer buy an ill-fitting suit. If you sell a customer a suit, he may never enter your store again.



HOW YOU CAN SELL MORE WOOL CLOTHING
Suggestions from 5000 retail clothing salesmen

The Sales Manual, which is the basis of the course, is being distributed free as a service to the industry by the members of the Bureau's Men's Wear Committee to all of the retail stores handling their different clothing lines. To date this distribution alone has required 22,000 copies of the manual.

N.B. It is liked so well in Australia that the Wool Board there is distributing 4,000 manuals to leading men's wear merchants.

Men's Wear Advisory Committee

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THE WOOL BUREAU, INC.
16 WEST 46TH STREET, NEW YORK 19, N. Y. • PL 7-5092



THE AMERICAN CONSUMER SPEAKS . . .

In a person-to-person survey, the U. S. Dept. of Agriculture learns first-hand from the nation's men the reasons why they prefer Wool in many articles of dress, as well as complaints which suggest manufacturing and merchandising improvements.

MAKING a sample survey of the 50,500,000 men over 16 years of age, with the purpose of determining the direction which the various major fibers might take in the future, the Department of Agriculture brought to light a number of most interesting consumer reactions to Wool. It is significant, we believe, that in each instance wherein the consumer was asked for a preferential selection . . . the better-educated and the better-salaried man on the street specified Wool as his first choice.

We present a resumé of the more pertinent sections of the survey, as a possible guide to the weavers, finishers, manufacturers and retailers of Wool products . . . so that they may know the consumer's natural bent, and thus capitalize on it.

IN MEN'S SHIRTS

Close to fifty percent of the men interviewed stated that they had owned either an all-wool or part-wool shirt within the past two years, with the great preponderance of wool-shirt purchasers situated in the northern sections of the country . . . Apparently age has a natural effect on the average man's attitude toward wool; 61% of the men under 25 years of age own wool shirts, whereas in the 55-and-up group only 37% of the men have bought them . . . Men with college educations and in the higher income groups were the prime market . . . Shrinkage in wool shirts is the biggest sales retardant; yet 7 out of every 10 wool-shirt owners stated their willingness to pay more money for a shrink-resistant wool shirt. This was particularly evident in rural areas with limited facilities for dry cleaning.

IN MEN'S TROUSERS.

The enormity of this field as an outlet for Wool is apparent when you realize that 37,000,000 men own and wear extra trousers made of the various fibers and blends, and that 70% of the men have anywhere from three pairs of extra trousers up . . . For all-year wear, men say they prefer Wool as much as all other fibers combined; for summer wear, 28% express a preference for Wool, but when you add wool-mixtures to the total, you find that almost as many men will take a wool or wool-blend pair of trousers as any other fiber for summer wear . . . Wool-and-cotton is the preferred blend . . . The main reasons given for the preference for Wool in extra trousers were (a) Wool holds its shape and appearance; (b) it is more durable; when cotton is added, the consumer likes the fabric because it feels comfortable and cool next to the skin . . . Of those who do not like wool in extra trousers, the major complaint was that the fabric is too warm, particularly in the summer months . . . That Wool is looked upon by the public as a desirable quality fiber is indicated by the wide divergences in what the consumer is willing to pay for trousers of different

fiber content: The median price in Wool is \$13; in cotton, \$6; in rayon, \$9 . . . When asked whether they would choose identical trousers at the same price, made of Wool or rayon, 47% chose Wool and 35% preferred rayon.

IN MEN'S SOCKS.

While recent and current developments by both American and overseas knitters are giving the use of Wool socks a great boost in popularity, at the time of the survey only 5% of the country's men preferred Wool over other fibers or blends . . . In areas where men switch to heavier socks for winter wear, however, about 40% of them would rather have Wool . . . Men like Wool socks because of comfort and durability; but those who don't wear Wool are under the impression that it is too warm and heavy . . . One of the serious drawbacks to the further sale of Wool socks is the problem of shrinkage (processes recently marketed are removing this obstacle) but again, as in the case of Wool shirts, those who prefer this fiber are willing to pay a little more money to get shrink-proof Wool socks.

IN SUMMER SUITS.

Of the 20,000,000 men who own summer suits, only 25% own more than one such garment; men who live in the southern cities are apt to own more than men in other areas, and there is a direct ratio between income level and summer suit ownership . . . Comfort and fabric content are apparently synonymous in men's minds, because the same percentage (60%) mentioned either one or the other when asked what was uppermost in their thinking when buying a summer suit . . . Most frequently stated as desirable features when buying were "I generally look for a material that will hold the press" and "I want something that will keep me cool in summer but has some body to it so it won't get wrinkled up all the time" . . . Almost 40% voted for Wool summer suits, over 33% for a mixture of some type, with northern residents favoring Wool while the south favored blends . . . Again, income levels have a direct bearing on fiber preference, with better-income men selecting Wool . . . Habit apparently influences purchases; 7 out of 10 men who once wore either a Wool or rayon summer suit prefer to stay with their original choice.

IN MEN'S ROBES.

More than half the nation's men (27,000,000) report that they own one or more robes, with men in the north and urban centers owning more than men in the south or rural sections . . . 32% of the men chose Wool, 16% liked mixtures, 13% chose cotton and 12% voted for rayon . . . Another 15% said that the fiber content made no difference to them . . . 77% of the men who own wool robes say they prefer this fiber because of greater warmth; those who preferred rayon gave their reasons as *feels good next to the skin* and *nice appearance* . . . For summer wear rayon is the favored fiber . . . Men who wear robes of fibers other than Wool claim it feels scratchy against the skin.

THE MECHANISM OF WOOL SHRINKAGE: WHY AND HOW DOES WOOL SHRINK?



Wool fiber as seen through micro-projector. Pencil designates fiber scales clearly in focus.

ALTHOUGH the fact that wool shrinks has been known to processors for many centuries . . . although the benefits of this phenomenon have been praised on the one hand, while its drawbacks have been deplored . . . the simple fact is that nobody yet understands exactly what happens to wool fibers to make them contract. On the other hand, certain facts have been unearthed which tell us a great deal more about wool than was known to its early users.

As the result of research . . . which is a glamorized name for curiosity . . . we now know that wool is composed of Keratin, the same substance which forms the human skin, nails and hair, and which contributes horns, feathers and ivory in the animal world. Keratin, closely allied to the proteins, is also akin to gelatine. When it is subjected to intense heat, it swells up and chars (you are familiar with the quick test as to the nature of a fiber . . . if, under a flame, it curls up and leaves a thick, hard ash, it is either wool or silk; if it disintegrates into a powdery ash, it is cotton, linen or a synthetic).

When Keratin is treated with heat and alkali it can be dissolved; in fact, this principle led to the discovery of the process for waving the hair on the feminine head. The hairdresser winds the subject's hair around myriad curlers, applies heat and ammonia to soften the Keratin (the hair), and when he removes them, the hair is set in a series of undulating waves.

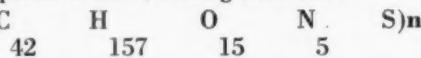
Returning to the matter of wool shrinkage, however . . . there are in actuality two types of shrinkage. One is the planned shrinkage, the controlled shrinkage to which a woolen cloth is purposefully and scientifically subjected for commercial purposes; the other is the natural and unexplained shrinkage which occurs either before the shrinkers start their work, or when they have done their work badly. Actually, the woolen industry knows how wool shrinks, and uses that knowledge to inject certain benefits, or to avert certain undesirable possibilities

Oil emulsion, sprayed on blend as it goes into the mixing picker, lubricates and moistens the fibers.

An Informative Discourse on the Peculiar Chemical and Mechanical Processes Reveals that the Mystery which has Baffled Wool Spinners and Weavers for Many Centuries is Still Unsolved and Elusive

contingent upon unanticipated shrinkage.

The chemical and mechanical construction of wool have long been known to researchers. In terms of the test-tube student, wool is composed of the following formula:



Translated, this means that the molecular structure of wool consists of balanced parts of carbon, hydrogen, oxygen, nitrogen, and sulphur; it should, theoretically, be simple to reproduce in the laboratory except for one obstacle: *n*, which stands for the Unknown in chemistry . . . the catalytic agent which apparently unifies the other elements and moulds them to perform the functions of wool. For quite a long time textile chemists have sought, through the simple but tiresome procedure of trial-and-error, to determine the precise nature of *n* and the conditions under which, when added, it converts the mass into wool. Thus far the progress has been limited to the development of some synthetics which contain some of the properties and virtues of wool; but nature has successfully defied man to reproduce this wonderful fiber to perfection.

Does Felting Cause Shrinkage?

From the mechanical aspect, much is known of wool, yet not enough to give a complete understanding of why wool shrinks. One of the outstanding characteristics of wool is its natural tendency to mill, felt or pull. These are the technical terms for what the consumer calls matting; actually, what occurs is that in wool the fibers knit together so that they cling to one another. In this manner the fibers support one another in resisting friction and at the same time make a fabric which contains multitudinous pockets of air.

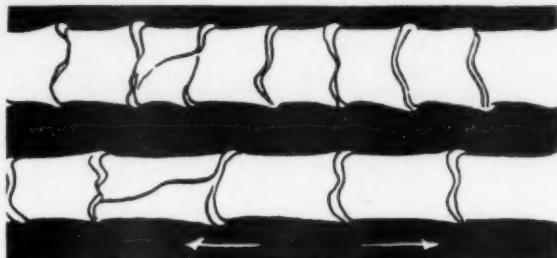
Because of these two features . . . which are individual to wool and are not shared by any vegetable fiber, cotton, rayon,

Lengths of fabric are sewn together and scoured to remove emulsion and oils. This scouring also relaxes the yarns and gives loft.

Newly spun yarn is steamed in a conditioning chamber to set the twists and condition the fibers.

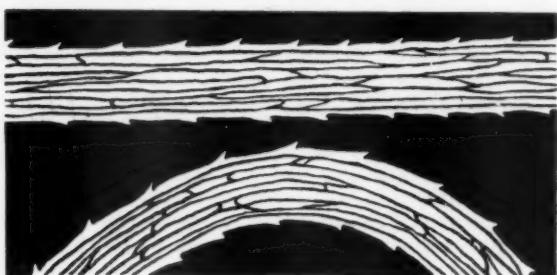


flax, or silk . . . wool is invaluable for clothing and certain other end uses. In fact, only the camel and certain types of goats yield a fiber with these properties; and it is interesting to observe that these animals are not closely related to sheep!



The enlarged view shows how wool scales overlap and relax to shape and size when stretched.

As you study the preceding diagrammatic micro-sketch of a laboratory view of a wool fiber, you will begin to understand the mechanical reasons why wool fiber mats, or felts. Wool has scales on its surface, overlapping much like the slate tiles on a roof. There is, as you will observe, no regularity of size, shape, or pattern in which the scales overlap; but extensive experimentation has proved that there is a definite directional trend within the wool fiber, which has no relation to the outer structure but depends on an unknown quality within the fiber itself. This is why those who deal with wool are confident that no real substitute for wool can ever be developed.

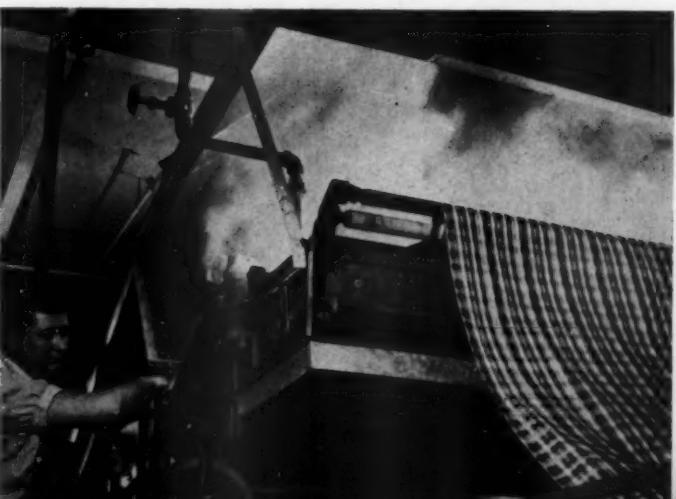


Another micro-study shows a wool fiber relaxed and bent. Note how the scales lock together.

For the sake of clarity, we reproduce above still another micro-sketch of the scale structure of wool fiber. Under the outer scales lies the cortex of the fiber: layer after layer of interlacing compound cells which adhere closely. They bend, they swell, they shrink, and they stretch . . . but they never break apart. Although the sketches seemingly depict wool as a fairly straight fiber, actually it grows in a wavy form with a natural twist or crimp. This crimp, plus the structure of the fiber, enables it to be stretched as much as 30 per cent beyond its length and, when released, to spring back to its original measure.

A great deal is known about shrinking, in the trade meaning of the word. In fact, an entire industry has grown up around this

Photograph below shows Londonizer passing the wool cloth over a steam bath for shrinking.



process. As a corollary, certain standards have been arrived at to guarantee to the user the elimination of faulty conditions which might affect the final stages of making woolen merchandise without their being ascertainable until too late.

Wool Can Take It . . .

Wool is treated with respect, but also with a great deal of violence, in the course of its refinement. Under several processes wool becomes almost a gelatinous plastic; in washing, as an example, wool is soaked in hot alkaline solutions to remove dirt and natural grease, until it is on the borderline of turning into jelly. Then it is boiled, oiled, teased, and mixed in machines . . . to be put through the rigors of carding and spinning; finally it is felted, cropped, finished, dried, steamed, pressed . . . each step with a pulling, a pushing, or a stretching involved.

What came from the weaver's loom 80 inches wide finally reaches the cutting table in a width of from 58 to 60 inches; the original piece of 60 yards has been processed, and finally London-shrunk, to only 48 yards. The London shrinking process, which originated when London became the center of cloth-working, is today a part of the trade jargon. To describe the process step by step is difficult, because in the course of generations each shrinker has developed details of improvement which make his work distinctive. However, the process as it is used today, both here and abroad, generally follows the steps laid out centuries ago in England.

The Shrinkers' Approach

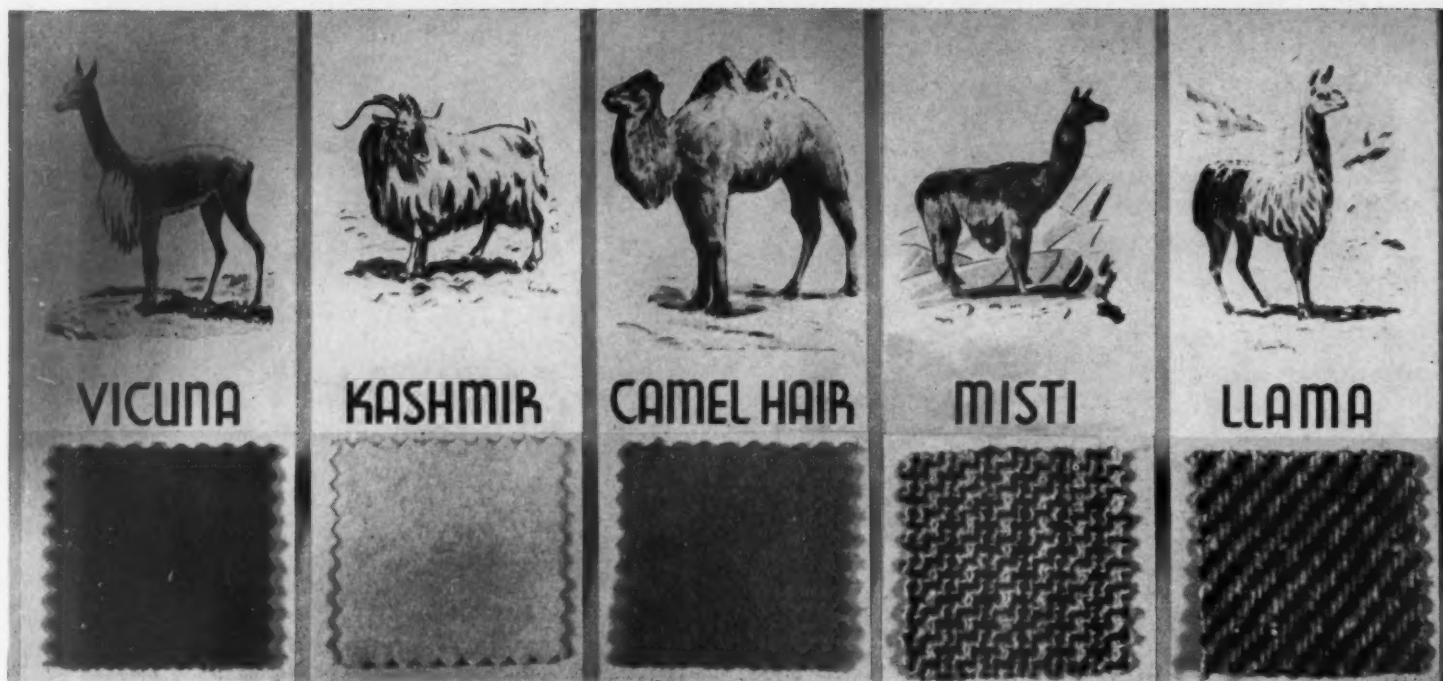
Most shrinkers use damping sheets, generally made of worsted, soaked in cold water. The web of the woolen cloth is folded into the damping sheet, although in some plants the web is moist-steamed or even sprayed. At any rate, the first step is to dampen and then warm the cloth thoroughly. It is left in this state for one or two days; then it is unrolled, and the web is hung over sticks to dry gently by natural evaporation. This generally requires forty-eight hours.

When ready, the cloth is folded for pressing in the hydraulic presses. Between the layers of cloth is inserted a sheet of highly glazed cardboard, known as press paper. The cloth is then subjected to either a hot press or cold press treatment, depending upon the desired finish; also the pressure may vary anywhere from 30 cwt. to three tons per square inch. After about twenty-four hours the press is released, the webs removed, and the press papers changed. If hot pressing is being done, new papers are used; in the case of cold pressing, the position of the papers is changed slightly, so that the edge marks of the papers will be pressed flat by the second pressing. The pressure is then applied for another full day.

Final Steps

Now the web is removed and examined. Not only are the width and length checked against the desired specifications, but every inch of the cloth is examined carefully for blemishes, every damage is marked with a thread, and the weaver is charged with the loss of a quarter of a yard as penalty. Sometimes the manufacturer's drying machine hides a defect such as a variance in width, but it cannot conceal this defect from the shrinking process; or, a piece may have been badly distorted in weaving, so that the checks or threads do not run evenly over the web. Whatever the faults, they are brought to light in the final examination in the shrinking process; and when it passes through to the end of the line, a piece of woolen goods should retain its shape under any circumstances.

As for the consumer interpretation of the word shrinkage, little can be said in explanation . . . and even less in condonation. All of the fine and patient research in the laboratories of the wool industry has yielded only a general understanding of *how* wool shrinks. But what causes it to do so is as yet a mystery. This is still another *n . . .* chemistry's sign for the unknown . . . to be probed and labeled in the future.



For a description of some of the properties of these animal fibers, see page opposite

WOOL COMES FROM MANY ANIMALS

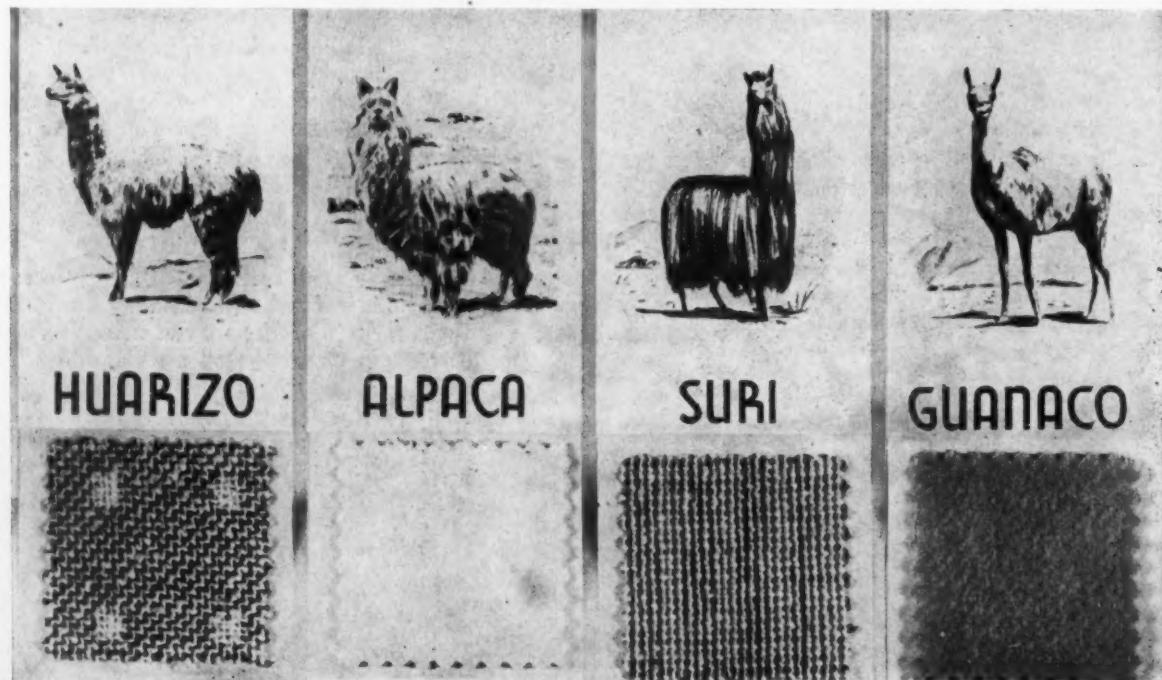
Although by far the majority of wool fleece is from the backs of sheep, a number of fine fibers of high quality come from quadrupeds in far corners of the earth.

AS THE DOMESTIC SHEEP WAS HERDED from its probable origin in Central Asia, across continents and oceans, man learned the value and virtues of its fleece for many purposes. Over the span of history, the word *wool* has acquired the automatic connotation of *sheep*. However, in remote and inaccessible areas, natives who had no access to wool-raising sheep were discovering that the fleece of indigenous animals possessed admirable and desirable qualities quite akin to those of sheep's wool.

As explorers and historians delved into these lands, they brought back samples of the fleece from these animals, which

have become the prized possession of those fortunate enough to obtain them. Because of the rather limited production of these unique fleeces, as well as the difficulty and expense involved in securing and processing them, the cost is far higher than of sheep's wool; on the other hand, each of them has rare qualities instantly recognizable and highly desirable.

The firm of S. Stroock & Co., Inc., which has long specialized in the processing of these rare fleeces, has developed an appreciation for them in the minds of both cutters and consumers; and while it is not possible for the masses to own them, most men and women are acquainted with the exquisite qualities of vicuna, kashmir, guanaco and the other members of this exclusive circle. On this page, with the cooperation of S. Stroock & Co., Inc., we present a short catalog of the fabrics from these rare fleeces and their sources.



Illustrations and swatch photos courtesy of S. Stroock & Co.

Well-known Animal Fibers . . .

ALPACA. A smaller member of the South American camel family, it is able to live at altitudes above twelve thousand feet. Its colors are like the Llama's — white, black, fawn, or grey. The fleece is very rich and silky with considerable luster. The Suri, a breed of Alpaca, has even finer and longer fleece which ultimately makes a more luxurious fabric. In comparison to the Llama, all breeds of the Alpaca have fleece containing less coarse fibers, but possessing a higher tensile strength. The average fineness of the Alpaca fleece is 26.7 microns and the hair length varies from 8 to 20 inches. Roughly six pounds of fleece are produced by the Alpaca every two years.

CAMEL. This is the two-humped or Bactrian species of the Chinese and Mongolian deserts, distinguished from the Dromedary or one-hump type. It is the source of camel's hair fiber, a mixed wool type having a fine undercoat of about 17 microns and coarse beard fibers. The fibers are obtained by shearing and also by collecting the hair shed during the molting period. This hair is reddish brown or tan. Because of the beauty of the color, fabrics containing camel's hair are left in the natural state or dyed to a darker shade of brown. The fine fur fibers are woven as such, or blended with fine wool for overcoats, topcoats, sportswear, and sports hosiery. The coarse hair is used in manufacture of transmission belts to withstand dampness and oil.

CASHMERE OR KASHMIR GOAT: A domesticated native of Tibet, China, Persia, and Turkestan, this animal sheds during the spring. The hair is plucked either by hand or picked off the shrubs against which the animals rub. The natural color of the fiber is white, black, brown or gray. The diameter of the cashmere fur fiber averages about 15 microns. The beard hairs are extremely irregular, varying from 30 to 140 microns in diameter. The separation of fine fibers from the long coarse hair is a tedious and difficult operation. As in the case of camel hair, Cashmere is often combed and sold in tops and noils.

GUANACO. Like the Alpaca this animal is related to the Llama, but is larger and more graceful. A native of Southern Argentina, it is found not only wild, but also in a domesticated state. Guanaquito, the progeny of the Guanaco, produces the fleece of the loveliest natural honey beige color known to man. This imitable color combines with a very soft handle, which is almost thrilling to the touch. Coats made of this fabulous material retail at hundreds of dollars.

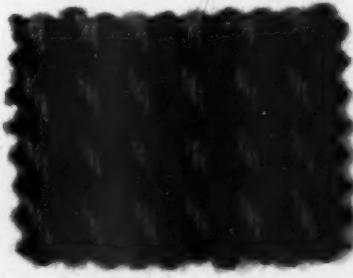
HUARIZO. See Llama.

LLAMA. The largest of the South American camelidae, it weighs about 250 pounds. It is used as a beast of burden because of its sure-footedness in the mountain areas. Its long fibers have an average diameter of 27 microns and vary in color from white to brown to black. They are uniform in diameter and length. Llama fleece is obtained by shearing in early December, a warm month in the southern hemisphere. Owned almost exclusively by Indians, the fleece is either woven by them or sold to factors who make it available to the textile industry for use in woolens and hair fiber materials which have an impressive luster, warmth and lightness of weight. Hybrid members of the Llama family are Huarizo (Llama father and Alpaca mother) and Misti (Alpaca father and Llama mother).

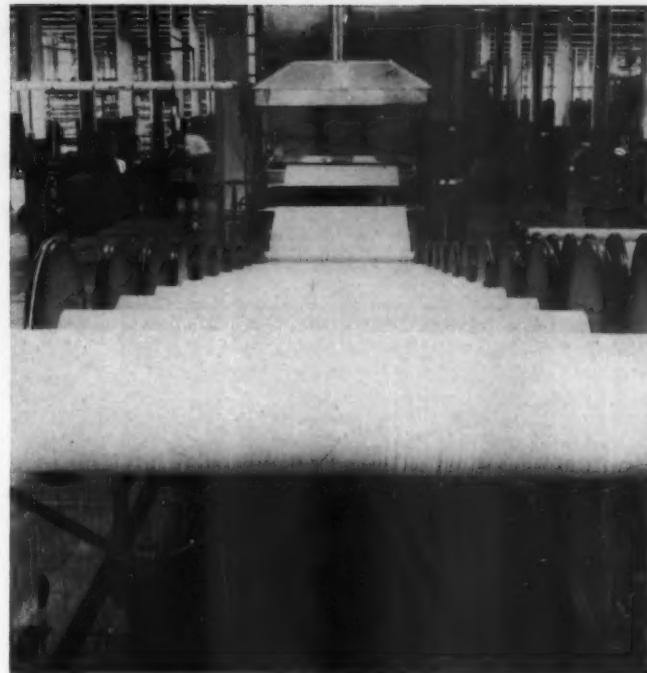
MISTI. See Llama.

SURI. See Alpaca.

VICUNA. A member of the Llama family like the Guanaco, this is the smallest and wildest. Living at heights above 16,000 feet, it must be killed to obtain the fleece which is reddish brown shading to white on the belly. The amount of coarse hair is negligible with the exception of the breast part which consists of long white beard hairs in the shape of an apron. One of the finest fibers in the world, the Vicuna fiber has an average diameter of 13.5 microns. Since 1921, the Peruvian government has protected the Vicuna by rigorous conservation measures. Its fibers make the softest coat cloth in the world.



Soft Hand Wool and Alpaca
Tweed Coating by STROOCK

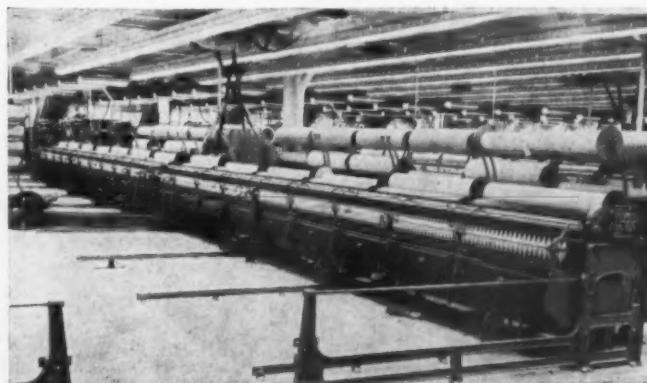


Rear view of Gentle Air Slasher installation in modern worsted mill. The photo above is a graphic illustration of the streamlined operations of modern American industry.

Courtesy Bachmann Uxbridge Worsted Corp.



The Conewinder for looms and knitting machinery was one of the mechanical operations introduced in the mid-19th century. Though the basic function of winding the wool yarn on spools to make it available for weaving remained the same as it had been for centuries, the mechanical winder performed its task through similar motions but with greatly accelerated speed.



Mule Spinning Frame showing, in the background, wool cards from which comes the roving spun on the mules.

Bachmann Uxbridge.



After each piece of cloth has been checked (*left*) it is spread on the tables and the pattern sections laid on. While efficient use of the cloth is desired, care is taken that the twill runs correctly in the finished suit.

W O O L

The making of a man's suit involves piecing together some sixty separate pieces of cloth and trimmings in 129 different operations. As the wool or worsted fabric is put through these numerous manipulations,



The shoulder seam is opened, and fullness pressed in by steam.



Before the coat goes further, the shoulder is carefully examined for both slope and evenness.



For the proper sleeve curve, it is under-pressed. Operator can now tell whether sleeve is correct.



Careful examination of sleeve tells whether it will hang right in finished suit.

The front of the vest is pressed after sewing, to gain shape.

The first off-pressing step is done with heavy steam pressing machines; the garment now takes shape.

Hand-finishing details are added where required; this calls for extreme sewing skill.

Second off-pressing is done by hand with gas irons, after sewing.





Here the cloth is cut by hand; in mass plants, large electric knives are used for speed.



Here the machine operator sews tape to the coat front, the first step in giving the coat the proper shape.



In order to gain a soft fullness in the lapels, padding is sewn in; in fine clothes, only worsted cloth is used.



The open seams are pressed quite flat to make for a very thin edge.

... as it proceeds from fabric to fashion

it is obvious that every one of the unique virtues of this fiber is called upon to resist a very real ordeal of physical handling, so that at the end of the process the fabric presents the fresh and appealing face which

makes wool so desired and instantly accepted by the consumer. Here, in pictorial form, is a simple exposition of some of the major steps taken by wool on its way from a piece of fabric to a finished fashion.



The collar, a strategic point in making the suit, is prepared for sewing.



All important points are hand-tacked by competent operators to take up stress and give right drape.



The coat-chest is then pressed carefully; this step is necessary in order to give coat front desired soft roll.



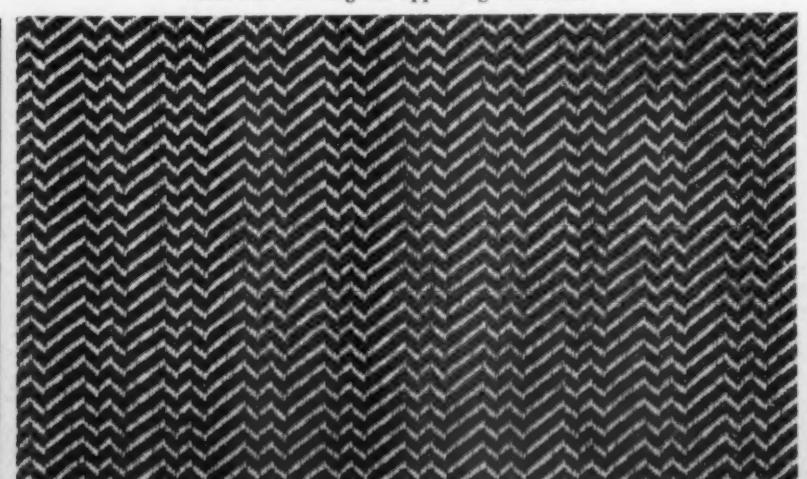
Buttonholes are made mostly by machine, sometimes by hand.



The suit is ready for final inspection, and to go to the shipping room.



Neatly but not tightly hung on racks, stock is ready for shipping department to pick orders and ship.



After all the foregoing operations . . . the handling and manipulation by men and machines . . . the fabric springs back into its original appealing freshness.



Students and their visiting girl friends were caught by the movie camera at Princeton week-end house parties . . . with Scottish Tartans prominent in the wardrobes of both men and women

NEW VARIATIONS on the ANCIENT TARTAN THEME

The sprightliness with which leading thinkers in the American textile industry used the theme of Authentic Clan Tartans to develop modern versions is the answer to the problems of Creative Starvation

When, as far back as September of 1949, the editors of AMERICAN FABRICS first broached the possibilities of Scottish Clan Tartans as an industry-wide merchandising and promotion theme, several points were made clear to mill executives:

First, it was proposed that the actual colorings and patterns should be copied from the Scottish woolens where feasible, but that awareness of American tastes and fashion trends must govern the final offerings.

Second, while the original Tartans were produced in Scotland entirely in woolen cloths, we proposed that the producers of *all* types of fabrics could just as sensibly adapt the feeling of the Tartans to their product character; we envisioned cotton, silk, linen, ramie, flax, and numerous synthetic fabrics either printed or woven in the Tartan patterns.

Third, it was stressed that the amount of good each mill could gain from this industry-wide promotion would be determined to a great extent by the degree of ingenuity with which fresh approaches were taken to the styling and marketing of its merchandise . . . and the presentation appeal to the consumer.

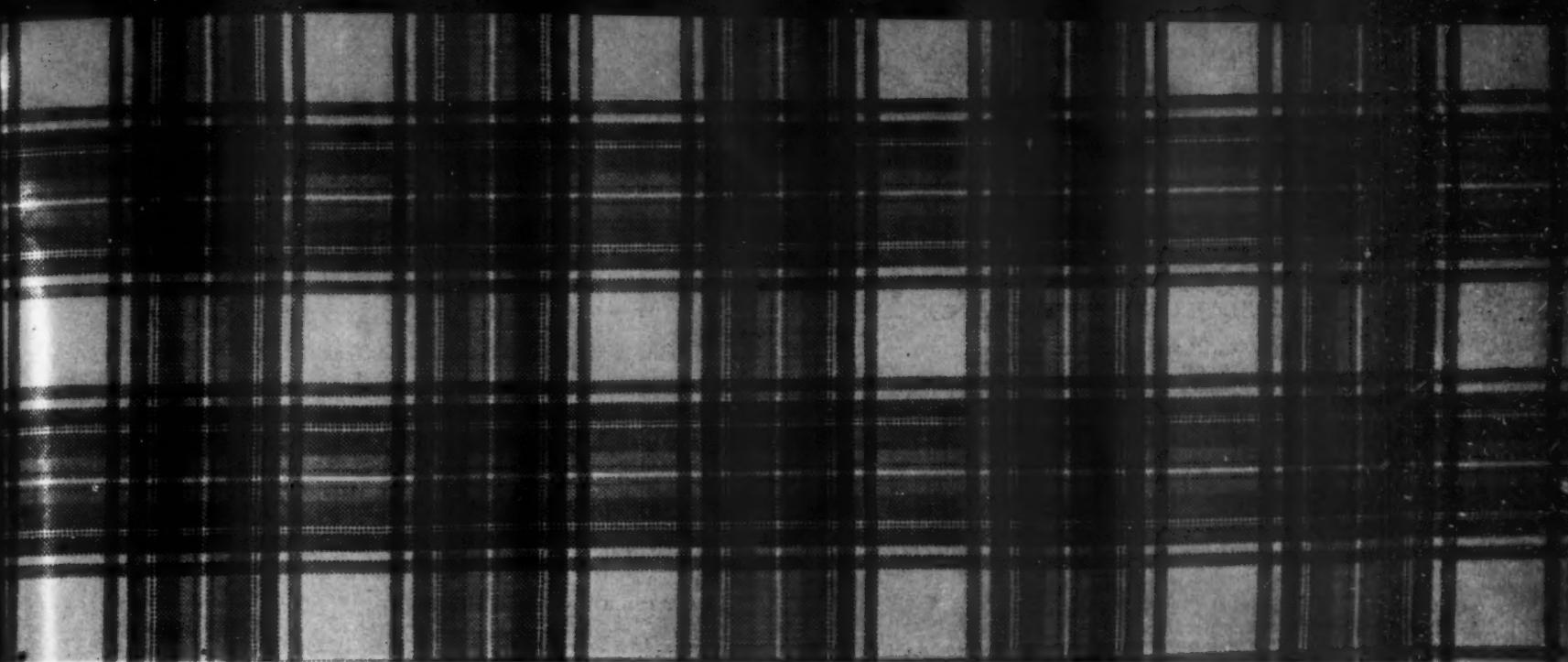
It takes but a glance at your daily newspaper, or at the windows of the apparel retailers in your city, to tell to what a

broad extent most of the leading American textile firms carried the Tartan theme. It has become, first of all, a campus fashion theme at most men's and women's colleges; it has spread, as it had to, to the older and younger generations; it has even pervaded the home decoration scene, bringing a new type of colorful accent . . . and hastening the period of obsolescence for much goods already in the consumer's hands.

Most cheering note, however, was the manner in which some mills used the Tartan theme to introduce new constructions in cloth. It may be argued that perhaps the fabrics would have met with success anyway; but the new developments undoubtedly were doubly assured of success when they combined their new construction features with the surging power of the industry's interest in Tartans.

It is in this direction, we believe, that the industry must continue to work if it is to replace Creative Starvation with Creative Thinking. AMERICAN FABRICS lays no claim to the development of these new cloths, beyond pointing the direction; the mills themselves are to be lauded for their alertness to the need of, and their ability to create, the new ideas which promise to fill the vacuum, and thus assure themselves of continued high production at a fair profit.





TARTAN in an especially fine worsted dressmaker suiting by BOTANY



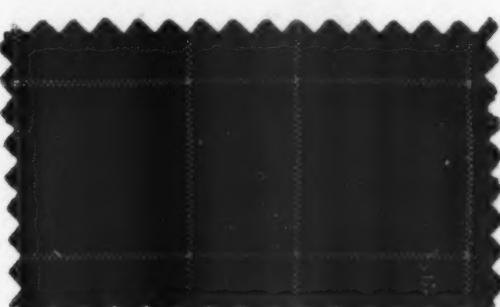
TARTAN in wool and viscose rayon by HOCKANUM

FASHION

Begins

with

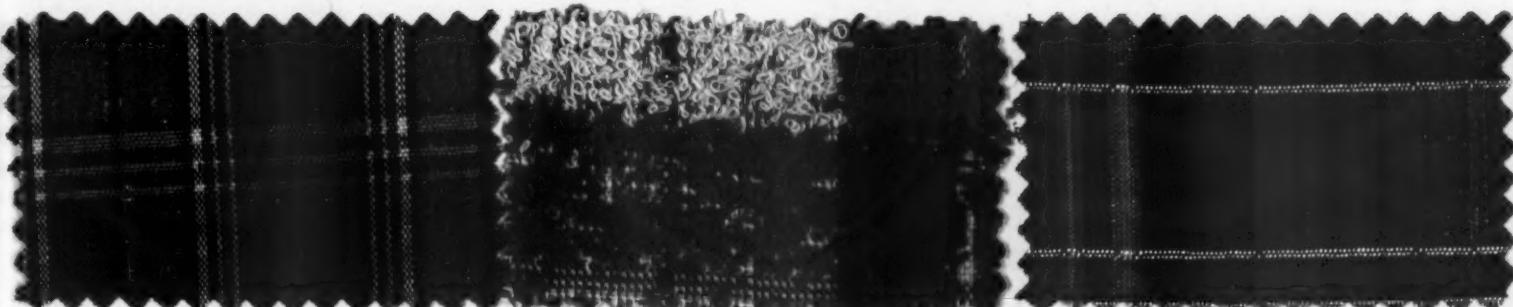
TARTAN FABRICS



TARTAN in viscose rayon by MOORESVILLE



TARTAN in two sheer cotton patterns by DAN RIVER



TARTAN in viscose rayon
by LANKENAU

TARTAN in cotton rayon
by CONE EXPORT

TARTAN in cotton and metallic
by GALEY AND LORD

*O*n this page AMERICAN FABRICS presents a number of actual fabrics woven by leading mills which graphically demonstrate the vitality of the Tartan trend. Note that while all the force of the Tartan idea is retained, there is a sufficient novelty to intrigue consumer interest for Spring, 1951.

FABRIC FACTS

A number of items of interest
to AMERICAN FABRICS readers have
been compiled by Dr. George E. Linton

As is well known, the purpose in drying wool is to remove only part of the moisture, since absolute dryness is not desirable. If too great a water content is allowed to remain, disastrous conditions like mildewing might arise. In order to maintain natural suppleness of the fiber, from 12% to 14% moisture content is retained after scouring.

A cotton cloth has been developed which can *breathe* and at the same time is capable of giving complete protection for many hours against continuous rain and wind. This cloth can be dry-cleaned or washed without lessening its good qualities.

Lightweight woolens are eminently suitable for tropical and semi-tropical wear, for they possess unrivaled hygienic advantages over other fabrics.

A practical formula for waterproofing woolen and worsted cloth uses 2½ pounds of alum, 2½ pounds of sugar of lead and 2 ounces of fine cut isinglas. Put the proofing material in water that is slightly warm; run the cloth in washer for twenty minutes.

Detergency is a complex operation. The wetting of a fabric involves not only the mere wetting angle of the solution to the material, but also the density of packing, and the orientation of filaments and hairs on the surface, for action of the detergent involves complete penetration.

After nearly three years of research, it is believed that ramie may eventually replace cotton for textiles in countries that are dependent upon importation of the latter fiber. Ramie tensile strength is greater than flax, hemp, or cotton, and can be maintained for longer periods.

It is widely believed that fiberglass is non-hygroscopic, but this is not entirely true. Although volume absorption is not possible, yet some moisture may be retained by glass fabrics because of capillary attraction between filaments, surface absorption, or by absorption on the textile size.

Saran and velon made from a plastic known as vinylidene are not affected by ordinary chemicals used in spotting, nor do stains adhere tenaciously to these fabrics. However, crumpling of the fabrics will cause permanent wrinkles. The fabrics will not stand high temperatures.

Textile fabrics which have been flame-proofed do not resist flame in the same manner as do glass or asbestos. Properly flame-proofed textiles exposed to a flame will char and glow, although the flame should not spread over the treated fabric.

Flame-proofing compounds should not affect the color of a fabric which compounds that are quite acid are likely to do. Although a white fabric may not be immediately affected by a flame-proofing compound, yet subsequent pressings or prolonged exposure to sunlight may turn it yellow.

Color changes in fabrics may result from dye changing its structure, as in sun or gas fading, or from loosening from the fabric which induces bleeding and running. There is no such thing as an all-ground 100% dye, but mills attempt to secure fastness by anticipating service for each fabric.

Dyeing temperatures vary for different fibers but, as a rule, they start at a moderate level, using soft water, and are then gradually raised. When the highest temperature is reached, garments are given a number of rinses to remove surplus dye, temperature being slowly reduced at successive rinses.

Flock is a dot or small figure that is neither embroidered nor woven in the fabric, but commonly consists of small particles applied to the material in a paste, by rubber cement, or other adhesive substances. It is often called dotted swiss, but spun glass fabrics can also be flock-printed.

The watered patterns of moiré are created by running the fabric through engraved rollers while simultaneously applying heat and pressure. This process flattens some of the yarn, making it reflect light differently. Cellulose acetate rayons permanently retain this property because the fibers soften under the process, becoming hardened while flat.

Plexon is a fabric made from plastic-coated yarn and should not be confused with a plastic-coated fabric where the coating is applied after yarn has been woven into a fabric. Plastic coating of cellulose acetate butyrate is likely to dissolve in many solvents and requires peculiar care when being cleaned.

Scorch is the burning of a fiber without the presence of flame; all common fibers will scorch at some temperature. The correct pressing temperatures to employ with various fibers are:

| | |
|--------------|----------------|
| rayon, nylon | 280°F to 300°F |
| silk | 320°F to 340°F |
| wool | 350°F to 370°F |
| cotton | 400°F to 420°F |
| linen | 450°F to 500°F |

To a layman, color is color; a technologist will classify colors as acid, basic, vat, substantive or of some other origin, and study their application by roller or screen printing, discharge, resist and other methods. The important consideration is fastness, for no dye is completely fast to all conditions.

Quality of fur is determined by the denseness, texture and color of the hairs. Besides the dirt and grime which they readily pick up, other deleterious elements are moths, heat, sunlight and friction.

After considerable research, aluminum yarn has made its appearance in formal evening gowns and similar luxury garments. This yarn is usually interwoven in a fabric in combination with rayon, wool, silk, and even cotton. It is made from aluminum metal coated with cellulose acetate, the colors currently used being copper, silver or gold.

Fiberglass fabrics should not be exposed to water, for the fine glass filaments are lubricated with a material that is easily dissipated by soap and water. When the lubrication film has been removed, the fabric often shrinks, loses its soft feel, and the colors are likely to bleed.

The warmth of woolen garments depends upon millions of tiny spaces trapped between the microscopically scaly fibers. Just how many there are is largely governed by the method of spinning and weaving the yarn, and of its nap, which is the fuzzy surface so

characteristic of tweeds and blankets. This surface can be created by teasing the ends of each fiber.

If a size 16 dress shrinks 1% it will decrease sizes approximately as follows:

| | |
|--------|-----------|
| length | 1/2 inch |
| bust | 3/8 inch |
| waist | 3/10 inch |
| hips | 2/5 inch |

The easiest method for distinguishing between a coating and a sizing of any fabric is to burn a small piece of it and watch the section just ahead of the flame. Vinyl resin will melt just before it burns. A coated cotton or regenerated rayon fabric will leave a skeleton ash while nylon or cellulose acetate will leave a hard ball ash.

The terms polymer and polymeric are widely used in connection with treatment of textile materials and production of resin compounds of high molecular weight.

One of the most valuable characteristics of wool felt is its resistance to wear. The tough fibers of which it is formed are almost as durable as hoofs and horns which, in composition, are chemically similar. Felt not only wears well, but it wears uniformly.

Since classical times, fuller's earth has been used in the wool industry for scouring and fulling and, as it produces a soft and attractive handle, it is still used to finish certain types of woolens.

Association of rubber thread with textiles dates from 1803, when a Paris concern made elastic ribbons by adhering strips of raw rubber to woven ribbon, the webs being used for garters.

Removing soil from woolen blankets would seem to involve no special difficulty except that wool in this form is far more sensitive to mechanical action, heat, and harsh soaps than is wool in the form of dress fabrics or suitings. Water should have correct softness; soaps, too, should be soft, while agitation and handling must be held to a minimum.

When rayon thread is stretched 3% in length, it recovers rapidly to its original length when released from the stretching force, but if the thread is stretched much more than 3%, it recovers more slowly and does not completely contract to its original length.

Stretched fabric can be the cause of much trouble to the cloth finisher, for the reason that on its initial wetting, permanent creases can be produced which can never afterwards be eradicated.

The fibers in a wet fabric often bind together as the result of lateral swelling and thus resist area contraction. It is advisable to wet-out the fabric with a fairly strong soap liquor rather than water, for soap provides a buoyancy and acts as a fiber lubricant.

Iron stains which are induced when a woolen cloth has been permitted to stand overnight in a machine can best be removed with oxalic acid followed by warm rinsing, while copper stains are removed by a cyanide solution.

Blending nylon and acetate would appear to be a natural. Acetate contributes its qualities of excellent hand and appearance, while nylon adds strength and wearing qualities. Fabrics are dimensionally stable.

Staining of cellulose-effect threads by certain acid and chrome dyes during piece-dyeing is considered to be actual dyeing. The acid dyes behave as a direct cotton dye which is held to the cellulose in a manner characteristic of that class of dyes.



An Ancient Peruvian Wool Fabric

Nylon and wool are natural complements to each other. Wool contributes fullness to manufactured yarn and can be made into a resilient fabric which is wrinkle-resistant. To these natural characteristics nylon brings its great wet or dry strength, abrasion resistance, washing qualities, crush resistance, and tear strength.

Snowballs are small, white aggregates of cotton fiber which are rolled rather compactly into a ball, and are a result of faulty control of air currents in the carding operation.

To make natural and synthetic fabrics wrinkle-proof, treat the material with compounds able to form resins by condensation with formaldehyde. After drying, expose the fabrics thus impregnated to formaldehyde vapors at temperatures above 100°F.

When handling nylon, the relative humidity of the atmosphere should be maintained at as high a level as is consistent with good performance, as its low moisture regain, compared with rayon or cotton, makes nylon yarn more susceptible to accumulation of static electricity.

Wool fibers are more susceptible to deterioration by bacteria than by fungi, although the complete effect of bacteria has not yet been thoroughly investigated.

Synthetic vat dyes are superior to natural indigo and madder. Cochineal is fast to light, but sensitive to alkali, while alizarin dyes are fast to washing.

As compared to roller printing, screen printing is popular because the initial installation is less costly; it is better suited to handle prints of a variety of color and design in limited yardage, and screens of practically any size can be prepared cheaply, so that large repeats may be produced.

letters to the editor

ON CLAN TARTAN ISSUE

TO THE EDITORS:

The Number 14, or *Bonnie Prince Charlie* issue of your journal is the most handsome member of an exceptionally fine looking family yet to come off the press! I wait with bated breath to see what you will do next, as each succeeding issue tops the previous one in a manner that seems hardly possible.

As any person with a drop of Scots blood in his veins would be delighted with this issue, and I cannot bring myself to part with mine, I wonder whether you would be good enough to send a copy to my father at the address below.

Jean McCollum Westwick
New Orleans

TO THE EDITORS:

I have been acquainted for some time with your very beautiful magazine and have just learned that your last issue includes a Clan Tartan Section which is available to readers.

I am an occupational therapist and I am sure that this section will be an asset in our weaving department at the hospital.

Mrs. Althea Stevely
Ontario Hospital
Woodstock, Ontario

TO THE EDITORS:

It is only recently that I have seen your journal *AMERICAN FABRICS* and I was very impressed with your No. 11 issue, Fall 1949; but your No. 14 issue, Summer 1950, is *exquisite*, and in the opinion of myself and friends it is just about the most wonderful journal we have yet seen.

The layout of your journal, your tartans, and colors are to my mind unsurpassed.

Mrs. R. M. Wrightman
South Wales, England

TO THE EDITORS:

You may recall an occasion when we met in your office to discuss hand-loom weaving and its relationship to *AMERICAN FABRICS*.

. . . I have every number of *AMERICAN FABRICS* from 1 to 14, have found it immensely helpful and inspiring and have no intention of doing without it in future. However, I deplore certain tendencies . . . in the current issue. Starting with the front cover, we have a portrait of *Bonnie Prince Charlie*. If the portrait is a good

one it certainly offers a clue to the preference for wearing skirts manifested by the clansmen not only of that period, but before and since. Who would have thought it of the brawny Highlanders?

This brief introduction supplies a key to the content of the ensuing pages. I daresay that the aim of this promotion of the tartan plaids is to encourage their manufacture in America and thus reduce the volume of imports; I wouldn't know. But why present it under the guise of *Creative Newness*? What about our American designers? There are hundreds of them who can offer handsomer designs than any of the tartans, most of which range from poor to downright ugly. Do you seriously believe that the promiscuous use of the tartans will furnish an answer to *Creative Starvation*? Though I realize that mine is a very small voice crying in the wilderness, I must say that I — do — NOT!

Roger Millen
Media, Penna.

TO THE EDITORS:

It seems to me that this is by far the best of any which you have published. In fact, we think so much of it that we would like to purchase five additional copies, each boxed for overseas mailing. I would like to have these copies for distribution among some of the good friends I met last fall in England and Scotland at the time of the Anglo-American Textile Education Conference.

Leslie B. Coombs, President
Bradford Durfee Tech. Institute
Fall River, Mass.

TO THE EDITORS:

We are interested in securing an extra copy of your recent issue in which you devoted space to Scottish clan tartans, etc. We would like this in connection with the operation of our Highlander *House of Scotch Cocktail Lounge*.

Harold H. Sheerer
Manager, The Morck Hotel
Aberdeen, Washington

TO THE EDITORS:

Enclosed find check for five additional copies of your most recent issue, No. 14, Summer 1950. The *Tartan Story* is a textbook *must* for our shop and I want to place a copy in each key department.

Ruth E. Broome,
Advertising Manager
Jays, Inc., Boston

DEITSCH COMMENT

TO THE EDITORS:

In my office hangs a framed reference of my own when I worked as a printers' devil in Philadelphia. The date is 1905. To this day, I can't resist a beautiful piece of printing.

I collect books, not only for their contents, but for their typography and make-up. You can, therefore, understand how thrilled and excited I was when I received the last issue of *AMERICAN FABRICS*. Your book is so beautiful that in my opinion it's a great work of art and will some day be a collectors' item of the art of printing.

Congratulations and best wishes for your continued success in helping to beautify our lives, for indeed, I felt when I opened the package that a hunk of beauty was before me.

Samuel L. Deitsch
Deitsch, Wersba & Coppola
New York

TO THE EDITORS:

We are gratefully acknowledging receipt of the current issue of your publication. We find it most interesting and know it will be found useful in the schools to where it will be sent by our Extension Department as part of a loan on industries and products. Richard C. Potter, Director
Worcester Natural History Museum

ON THE CHARTRES ISSUE

TO THE EDITORS:

. . . It is a magnificent production in every way. Such pictures of Chartres . . . that grave and beautiful angel looking down over the city and field! And the excerpts from P. D. Ouspensky's book with the Leonardo da Vinci drawings so aptly chosen, portraying great ideas matched and surrounded by the work of one of the planet's greatest men. The whole thing moved me very much.

P. Travers
London, England

FROM A PUBLISHER

TO THE EDITORS:

I thought you might not object to this letter; it is a fan letter from a fellow publisher.

I subscribe to your magazine for its sheer beauty and the fine spirit of creativeness which is apparent in its every issue.

This is really a beautiful job of quality publishing and I couldn't resist telling you so.

William B. Ziff
Ziff-Davis Publishing Co.
New York

A. F. OFFERINGS TO READERS

Individual bound copies of *The Story of Clan Tartans*, from issue No. 14, \$2.00 each. Containing history and background, 38 full-color reproductions of authentic tartans, color illustrations of tartan dress, and charts.

Condensed Dictionary of Wool and Worsted Terms, in three parts. Immensely popular reprint bound in one vol., \$3.00. Still available are copies of Part 1 of *Hand-Loom Weaving in America*, \$1.00.

SUGGESTED NAME FOR FABRIC INDUSTRIES

TO THE EDITORS:

The combined industries of fabrics, textiles, etc., have a great tradition which prompts me to suggest the name *Fabritecure* as a logical all-embracing name.

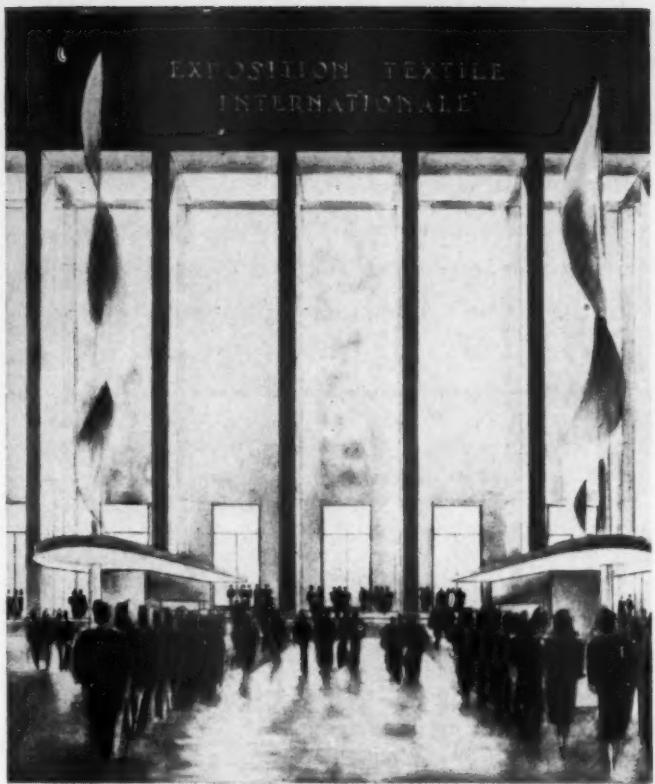
The word *fabric* is Latin in origin, but it is quite well known and used in all modern languages. Whatever the respective translations of *fabric* may be, we can safely state that it is the common denominator of all thought and all practical and aesthetic applications. It is the word that begins the weaving of evolutionary thought and all inclusive spiritual manifestations according to human unfoldment beyond the stages of food, clothing, and shelter.

The suffix *tecture* in *Fabritecure*, a Greek derivative, relates to the modern technical interests in the spirit of progress. The ending *ture* is a syllable found in many words symbolizing Arts or Fine Arts as, for example, sculpture, portraiture, architecture, and literature . . . so why not *Fabritecure*?

Since the concept *Fabric* embraces everything and anything under the sun and also the march of technical and artistic progress, it follows that one-word symbol is necessary to keep up and continue its artistic and scientific progress.

The word *Fabritecure* becomes the most obvious one to represent the art, the science and technology of fabrics for all of the related designers and craft workers of the fabric field. The *Fabritecure* will be a creative planner, designer and craftsman functioning in *Fabritecure* to serve gloriously the Fabric Industries of America.

Oscar A. Turner
Chicago, Ill.



ALL EYES WILL TURN TO LILLE

The International Textile Exhibition will attract many of the world's top textile and allied exhibitors, as well as key people of the American manufacturing and retailing fields.

IT IS MOST SUITABLE that the first International Textile Exhibition should be staged in Lille, France, opening on April 28th, 1951. For Lille, historic center of colorful Flanders, is symbolic of the finest in the textile world; its very name connotes quality and ingenuity in the designing and construction of cloth.

The plans for the International Textile Exhibition, which were forcibly thrust aside by the recent World War, call for a permanent and annual showing of the newest developments in textiles, in technology and in fashion from the foremost creators of each country. In separate buildings, the exhibitors will group under their national flags to show their attainments. Thus the textile and fashion industries of America will have the chance to present its finest creations alongside the candidates from France, Italy, England, and all the other nations.

Designed primarily for those companies which work within the textile field and those fields related to textiles, it is anticipated that the Exhibition will attract a great number of retailing executives as well as American manufacturers. They will have the opportunity to see, under one roof, the newest creations and the newest production methods developed by other countries; and a special effort will be made by French industry, in particular, to impress upon Americans the promotional as well as the profitable advantages of purchasing certain finished fashion merchandise in Europe. One of the interesting exhibits planned to dramatize this point will consist of a continuing demonstration of the making of fashions, commencing with the designer at her sketchboard, and proceeding to the finished garment presented in a fashion show.

Already a sizable number of American companies have reserved exhibit space to show foreign firms the progress made by our technological engineers. It will be most interesting to observe our machinery in comparison with the showings from other shores; and the interchange of ideas and information should be even more interesting as well as useful.

FROM THIS SKEIN of raw silk, especially prepared for this issue of AMERICAN FABRICS, emanate the richness, the unmatched and universally desired properties which will enable Silk to maintain its position as the truly regal fiber. Note that even in the raw state, the distinguishing characteristic of a crunchy feel is evident to the touch. The skein itself was supplied through the cooperation of the U. S. Testing Co. and International Silk Association.

* * *

This specially woven bordura or galloon which is an example of the type used in the 18th and 19th centuries as straps to pull windows in carriages up and down, and also for borders on draperies and furniture, was woven by Scalamandre Silks.

An all-silk construction and unquestionably the most elaborate type ever woven in this country, it was made with six warps, and the effect is that of uncut velvet. The design probably originated in Italy or France.

A limited number of yards of this bordura was made for the interior furnishings of Mount Vernon. Many people refer to it as Powell, an early mayor of Philadelphia and a close friend of George Washington.

* * *

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THE CONSUMER

The millman, the converter, the apparel manufacturer, the retailer, the retail clerk . . . all throw at Mrs. Consumer words and phrases as selling blandishment . . . all assuming that she knows what they're talking about. Sadly enough, it's gibberish to her. And so writer Cora Carlyle gathers a group of typical

Q. Several weeks ago I bought a silk shantung skirt that the buyer assured me was permanently pleated. With the first dry cleaning, however, the pleats came out. The skirt was sent back to the factory to be again permanently pleated. Now then . . .

1. What does the term *permanently pleated* really mean? Does it have different meanings for different fabrics? Can silk shantung be permanently pleated?
 2. Do permanently pleated fabrics or garments require a special dry cleaning process?
 3. Can the fabric or garment be washed . . . that is, after pleating?
- A.** 1. *Permanently pleated* means that the pleats should remain in the material for the life of the garment, and that the fabric should withstand washing, wet cleaning, and dry cleaning without change. Fabrics that successfully take permanent pleats are those which can be set by the application of heat so that the pleats are formed. The term applies equally to all fabrics which can thus be set. Silk shantung can not be permanently pleated because the silk fiber does not possess inherent qualities which enable it to take on a permanent setting.
2. No special method or procedure is needed for dry cleaning permanently pleated fabrics. Ordinary wet or dry cleaning is satisfactory.
3. If *permanently pleated*, a garment may be washed by either machine or hand without affecting the pleats.

Q. Just what is a *sleazy* fabric?

- A.** This refers to a fabric in which the number of threads in the warp and the filling have been *skimped* and are not sufficient to make the resulting weave construction firm and able to stand up under wear. Such a cloth will have a limp, unattractive, and uneven surface effect. Garments made from sleazy cloth will usually lose their shape. Improper finishing may also cause cloth to become sleazy.

Q. Why does my white silk blouse turn yellow after washing?

- A.** White silk will turn yellow because of the oil in most commercial soaps. If you wash silk fabrics with a pure olive oil soap, your garments will come out white. In fact, continuous washings, even with ordinary soaps, will make a silk blouse as white as when it was new.

Q. Can you tell me something about embossed fabrics?

- A.** They are light-weight, plain weave goods such as gingham, chambray and similar fabrics, put through a special process after dyeing for durable embossing which will last for the life of the material.

The goods are run through a machine which prints a resin

on them according to some design motif. The resin-treated cloth is then run through a drying chamber where the temperature is very high. The resulting pattern, or embossing, will last through household washing and dry cleaning.

Q. Please tell me how the fringes of blankets are processed in order to obtain the rolled effect seen in them?

- A.** In order to make fringe at the lengthwise ends of blankets, the desired number of inches of warp yarn is left hanging without any filling yarn being woven in.

After the blanket weaving is completed, the fringe is knotted by hand. A skilled operator picks up the desired number of yarns, makes the knot, pushes the knot close against the body of the fabric, and then pulls the yarn straight out. These yarns have enough twist so that they will not ravel. In some cases, the twist is set by steam.

Q. Should I buy lingerie and dress goods of warp knit fabrics or of circular knit? I note that the circular types are much lower in price.

- A.** While a warp knit fabric may cost more it will give much better wear. In addition, it will hold its shape better and have excellent draping qualities. Another thing to remember is that circular knit fabrics do not resist runs. Buy warp knit if you can, and be sure.

Q. What should I know about spots and stains on the garments worn by my family so that the dry cleaner can know how to handle them successfully?

- A.** First of all, bear in mind that there are dry cleaners and dry cleaners; some know what to do in handling different types of soil and stains, while others are liable to make the garment more unattractive with attempts at cleaning.

After you have spilled something on a garment, do not press it with a hot iron since this may *set* the stain. Do not rub a stain too vigorously with water or a dry cleaning agent; you may chafe the cloth and damage the color. Tell the cleaner what the stain is. Pinning a note on the garment is a suggestion for you. Always send fabrics and garments to a reputable and responsible cleaner.

Q. Can you give me some information on Scratch Moiré and put us in touch with some finishing plant that does this work?

- A.** The scratch method of moiré or watermarking was invented about 1900 in France, being particularly popular on silk failles. In due course of time the method was applied to rayons, chiefly on 24" tie goods. About 1927, the process was further improved by inventors in this country for use on acetate rayon goods. At present there are four patents held in the United States.

The method permits the production of figured patterns such

WANTS TO KNOW...

Mrs. Consumers from time to time . . . asks them what they'd like clarified in textile terms . . . and then fires the questions at Dr. George Linton. Here is the batch. The moral is: Just because you know what you mean, don't take it for granted that the other person does.



as flowers, Mexican hats, stars, tear drops, tropical palms.

The goods to be treated are run up on a beam, doubled. They are then run through the scratching machine, a device that closely resembles a roller printing frame, having an engraved roller made of rubber. Bearing against this engraved roller, and revolving at a greater speed, is a series of scratch blades set into a scratch roller comparable with those of a lawn mower.

The doubled cloth is run between the scratch blades and the engraved rubber roller, and the filling of the fabric is shifted in those places where the blades find resistance in the raised places of the engraved rubber roller.

Although only a limited number of fabrics are suitable for this method, chiefly 200 and 300 denier taffetas, and selected tie silk failles, the method is extremely popular on acetate rayon taffetas. To secure further information you may write Newburgh Moiré Co., Inc., 627 W. 43rd St., New York City.

Q. I am doing a research paper for my M.S. degree in textiles. The subject is the origin of textile inventions. I understand that Leonardo da Vinci made numerous valuable contributions to the textile industry and am wondering if your textile editor might be able to shed some light in the matter.

A. Most assuredly, da Vinci contributed to the great textile industry in the late 15th and early 16th centuries. Some of his machinery developments in textiles include the flyer spindle, the napper machine, cloth shearer, a machine for twisting cord into a single strand, etc. Since you live near enough to New York City, it is suggested that you visit the Metropolitan Museum of Art and the New York Museum of Science and Industry for more detailed information.

Q. One of my friends is a wool sorter. What does he do?

A. He is a very skilled operator. He handles fleeces as they come in from the range. He judges and classifies the fleeces, putting them into their quality categories. It takes him years to attain this skill, and he is one of the most valued men in the wool manufacturing plant.

Q. What is teasing? What does it do to wool cloth?

A. Thistles or teasels are fastened into a roller frame so that they revolve against the cloth and gently raise a nap. Some manufacturers use wire points, but these may injure the fabric. Teasels are more resilient in their touch.

Q. Are nylon fabrics affected by bleaches applied to them?

A. Strong bleaches will weaken nylon the same as other fibers. They should be used carefully and only when unsightly stains or discolorations cannot be removed by proper washing or cleaning. Incidentally, may I suggest that you obtain a copy of *Care of Nylon*, by writing to E. I. DuPont de Nemours & Co., Inc., Wilmington 98, Delaware.

Q. Kindly give me some information on crushed plush since I have not been able to find much about it in books or museums.

A. Crushed plush is regularly woven as a plain pile fabric with the content of the pile either rayon or mohair, usually the former. The motifs simulate fur-bearing animal skins such as krimmer, kerami, caracul, muskrat, etc. The effect is obtained by hand, by a machine *whirling process*, or by stencil designs. The fabrics are definitely used to imitate furs and can be made into full length garments, jackets, evening wraps, and collar-and-cuff trimmings. Some of the cloth is used in the toy trade for stuffed animals.

Crushed plush with a mohair pile construction is used for furniture covers, or for draperies occasionally. This type of plush is merely crushed without any attempt at symmetry or design. Some of the fabric is used for window displays.

Q. I would like to try machine stitching with nylon spool thread. Are there any special directions?

A. You will find nylon thread very satisfactory. Nylon stitching will not shrink and pucker after washing, and wears well.

In use on the machine, test for proper tension and size of stitch, as with any other thread. You do not need small stitches, as nylon thread is tough. This makes for quicker operation. Use loose tension, too, as nylon thread will not break during wear. Always cut nylon thread with scissors . . . you can't break it by hand, as it is too strong.

Q. What is meant when manufacturers scour wool?

A. This is an initial step in the preparation of raw wool, or wool from the sheep's back, during which the wool is cleansed with chemicals so that it is free from soil, leaves, twigs, etc., which the sheep has picked up while growing the fleece.

The term is also used when, later in manufacture, the yarn and then the cloth is cleansed again.

Q. Very often I see the term, dobby weaves or dobby designs, used in department store advertising of cotton and rayon goods. Please tell me how to identify these.

A. Dobbies are so-called fancy fabrics made with small designs such as diamonds, squares, fancy figured stripes, fancy twills or comparable effects. A dobby might be called a miniature Jacquard design. To make the design, more than six filling threads must be used in the repeat of the pattern.

Q. What are some characteristics of chiffon so that I may know just what to look for when buying the material over the counter in the store. Some lightweight crepe fabrics seem to resemble chiffon, hence my dilemma.

A. Chiffon is always a thin, smooth, sheer lightweight fabric with a soft and airy handle. The term smooth is used here specifically to differentiate chiffon from crepe fabrics, many of which are sheer but have a pebbled or granular face effect.



BLENDING IS PURELY A PROBLEM IN BALANCE

Just as a competent chemist knows not only which ingredients to use, but in what proportions and under what conditions they best perform, so the weaver of blended cloths must be skilled as well as ingenious.

The difference between a dinner eaten in a roadside diner and one served at the Colony is in the skill with which the chef manipulates the identical raw materials. Similarly, the looming of a blended fabric calls for a great deal of vision, of skill, and of facilities in both machinery and manpower to bring forth a cloth to serve a specific purpose most perfectly.

When a mill first envisions a new type of blended cloth, it is with a definite end use in mind. Perhaps the fabric is intended as a non-slip lingerie cloth, possibly a sports dress fabric, or a man's suiting . . . but whatever the purpose, it suggests instantly to the skilled technologist certain required properties in feel, in tensile strength, in washability, in sunfastness, or innumerable other fields.

One such cloth might evolve best when woven with rayon and acetate yarns; another, the technologist may believe, needs the addition of a Teca; still another might warrant the use of nylon, or Vicara, or a viscose fiber. So the technologist begins by studying the properties of the various types of fibers; but then come the more intricate problems of *how much* of each fiber to use. For instance, in some quarters much is being made of the fact that a certain mill offers a 25% nylon content instead of the 12% or 15% contained in a competitive cloth. Unfortunately, the uninformed both in the cutting trade and among the consuming public are often

prone to accept this higher nylon content as *prima facie* evidence of its greater worth. As a matter of fact, once the proper balance of fiber types has been arrived at to perform the fabric's function, the addition of more nylon serves no functional purpose; and, indeed, besides increasing the cost, it frequently vitiates the effectiveness of the blend. Comparably, if a pediatrician should recommend six minims of cod liver oil in an infant's diet as bone-building food, it is not true that sixty minims would be *ten* times as good for the child's health.

Still another problem in producing a blended fabric is the matter of plying, or twisting, the individual fibers. For one purpose it is necessary to have a high twist; for another, a low twist is best . . . and here again the technologist's skill is of great importance. And still other problems concern themselves with the weight of the different fibers, the preparation for color, the consideration of problems in cutting and sewing the finished cloth.

So the next time you handle a piece of plied-yarn fabric, remember that it represents a great deal of technological skill, ingenuity and experimentation. Indeed it can be said that there is much more than meets the eye . . . or the hand . . . in blended fabrics; and what you *don't* see is what makes the cloth as fine as it is. The unseen ingredient is the skill and the integrity of the mill which wove it.



At left: A sand crepe-type dress sheer. At right: An alpaca-type dress fabric. Both are attained by blending plied warp and filling yarns, and utilizing acetate and nylon fibers. By Robbins Mills.



PLUMAGE HUES

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when you see the array of "Plumage
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Man's Proclamation of
T R U T H
Across Ten Thousand Years

Too many of us today feel a kind of helpless resignation in the face of events and creeds we know in our hearts to be wrong. We see one third of Earth's inhabitants given over to a belief that the State is the highest and only master, whose ends justify all crimes. We see another third considering the use of appalling, cataclysmic weapons to annihilate that State and its followers. The scourge of War . . . its tensions, fears, hates . . . lies heavy on mankind, and on each of us.

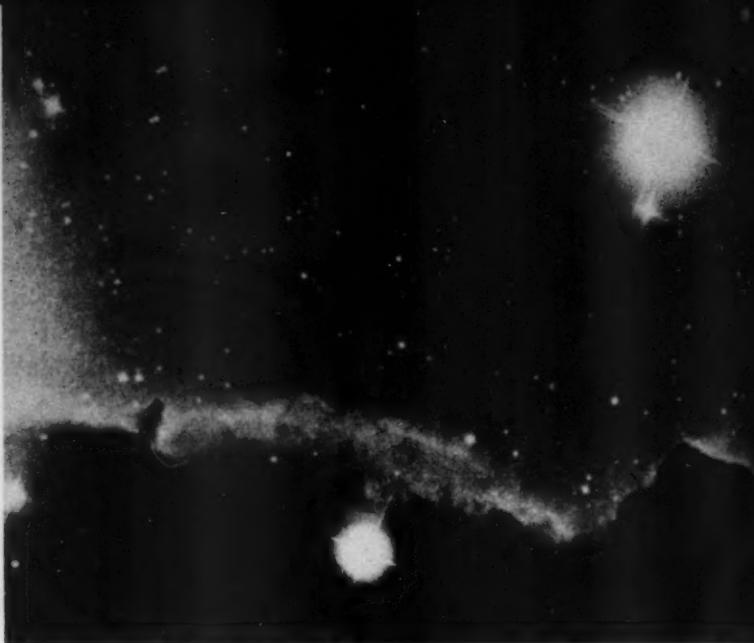
And with it, the beliefs men had seem faint. They fade. Somehow, through seeing wrong apparently triumph, too many of us inwardly give up, resign, accept . . . as though saying to ourselves, "Well, what is, is. If that's how it is, I suppose it can't be otherwise."

And yet throughout history there has always been this "crimson thread" of wars and tyrannies, revolts, oppression, fear, hate and bloodshed. And I say unto you, there shall be wars and rumors of wars. . . . But is that all? Is this the only certainty we can count on to live by? Or has there been another thread, another history than this history of crime?

We know there has. Since the beginning of recorded time men have sought for Truth. Some . . . higher than foolish, confused folk like us . . . have sought and found and proclaimed the truth they saw, for the benefit of us all. They, and what they passed on to mankind, stand out like beacons across the dark acts of men like ourselves. Such names as Buddha, Mohammed, and Jesus have survived the oblivion of many emperors and generals.

And herein lies a great assurance . . . that what one found and taught is never contradicted by another's teaching. Jesus, Confucius, Moses, each in his own way describes the same facts and principles.

If ever there was a time to look and take account of what these men saw and told, surely it is now. If ever men needed wisdom, it is today. Whether in the highest places, where decisions are said to be made, or in our own more humble lives, the final folly would be to forget . . . or to pass blindly by what the greatest that our race has produced have tried to teach their fellows. Let not the epitaph of the Human Race be "Light was given, but in blindness they lived, despaired, and died."



Zoroaster

From the Zend-Avesta:

All good thoughts, words, and works are done with knowledge.
All evil thoughts, words, and works are not done with knowledge.
All good thoughts, words, and works lead to Paradise.
All evil thoughts, words, and works lead to Hell.
To all good thoughts, words, and works belongs Paradise —
So is it manifest to the pure.

Katha-Upanishad

Death said, "The good is one, the pleasant another; both command the soul. Who follows the good, attains sanctity; who follows the pleasant, drops out of the race."

"Every man faces both. The mind of the wise man draws him to the good, the flesh of the fool drives him to the pleasant."

"Diverging roads . . . one called ignorance, the other wisdom! Rejecting images of pleasure, Nachiketas, you turn toward wisdom!"

"Fools brag of their knowledge; proud, ignorant, dissolving, blind led by the blind, staggering to and fro."

"What can the money-maddened simpleton know of the future? This is the only world, cries he; because he thinks there is no other, I kill him again and again."

"Some have never heard of the Self, some have heard but cannot find Him. Who finds Him is a world's wonder, who expounds Him is a world's wonder, who inherits Him from his Master is a world's wonder. . . ."

Bhagavad-Gita

Underneath the sometimes difficult language of the Bhagavad-Gita runs the teaching that man can approach knowledge of what is truth only through work on himself. And by work is meant a definite discipline in

which a man observes his manifestations and makes efforts to control them. Almost at the very beginning of the Bhagavad-Gita, Arjuna questions Krishna: "How does one identify a man who knows truth . . . who is an illumined person?"

The god Krishna answers: "A man who is not affected by success or failure, who is free from emotions such as fear, anger, pride, vanity, jealousy, hate . . . a man who can control his mind . . . he is illumined."

ARJUNA ASKED:

"My Lord! How can we recognize the saint who has attained Pure Intellect, who has reached the state of Bliss, and whose mind is steady? How does he talk, how does he live, how act?"

LORD KRISHNA REPLIED:

"The sage, whose mind is unruffled in suffering, whose desire is not aroused by enjoyment, who is without attachment, anger, or fear . . . take him to be one who stands at that lofty level."

"He who can withdraw his senses from the attraction of their objects, as the tortoise draws in his limbs within his shell . . . take it that such an one has attained Perfection."

"O Arjuna! The mind of him, who is trying to conquer them, is forcibly carried away, in spite of efforts, by his tumultuous senses. Restraining them all, let him meditate steadfastly on Me; for who thus conquers his senses achieves perfection."

* * *

That a man can engage in the ordinary pursuits of life . . . that while taking part in worldly affairs he still has the possibility of reaching greatest spiritual heights . . . is another important idea of the Bhagavad-Gita. This is forcefully expressed in a lesson which Krishna gives to Arjuna on the field of battle.

Arjuna is placed in a situation where he must fight for the deliverance of his nation and to restore order and peace. He does not wish to take part in battle and, to make his position more difficult, in the opposing army are friends and relatives. Here, truly, is a dilemma.

Krishna's answer is that Arjuna must carry out the duties which life imposes on him. The thought expressed here is almost exactly the same as that expressed in the words of the Gospel: "Render unto Caesar that which is Caesar's." Krishna emphasizes, however, that he must perform his actions without personal or emotional involvement. Arjuna is told

This story begins many thousands of years ago. How many thousands no one knows, because there is no evidence to establish at what date Zoroaster lived. Some say six thousand years B.C.; some more, some less. In our modern arrogance we may think that the people of those remote times were barbaric and uncivilized. But what remains of their teachings shows that they had wisdom; and, indeed, there is a tradition that the Three Wise Men who came to pay homage at the birth of Christ were followers of the ancient Zoroaster.



KRISHNA QUELLING KALIYA — METROPOLITAN MUSEUM

that obligations must be fulfilled, but without anger or hatred, without passion or attachment.

In a passage remarkable for its insight, the Gita states that a man finds happiness through right conduct . . . that to escape grief a man must first subdue his mind . . . that a man is loved by others when he is without vanity . . . that man, though he sees others dying all around him, cannot contemplate the fact that he himself will die.

Early Buddhist

"Lord, help me to remember Thy infinite greatness and my own nothingness,
So that all the problems of my life may be answered
And I may be abundantly instructed in the path to Nirvana."

— BUDDHIST PRAYER

The doctrine of the setting-up of mindfulness is the most important in early Buddhism. These essential points of the doctrine or tract which Buddha addressed to the brethren of the order are from original writings.

The one and only path, bhikkhus, leading to the purification of beings, to passing far beyond grief, to the dying-out of ill and misery, to the attainment of right method, to the realization of the Nirvana, is the Four-Fold Setting up of Mindfulness.

Which are the Four? Herein, O bhikkhus, let a brother, as to the body, continue so to look upon the body that he remains ardent, self-possessed, and mindful, so as to overcome both the hankering and the dejection common in the world. And in the same way as to feelings, thoughts, and ideas, let him so look upon each, that he remains ardent, self-possessed, and mindful, so as to overcome both the hankering and the dejection common in the world.

And how does a brother consider the body?

A brother, when he is walking, is aware of it thus: *I walk*; or when he is standing, or sitting, or lying down, he is aware of it. However he is disposing the body, he is aware thereof.

And moreover, bhikkhus, a brother . . . whether he departs or returns, whether he looks at or looks away from, whether he has drawn in or stretched out (his limbs); whether he has donned under-robe, over-robe, or bowl, whether he is eating, drinking, chewing, reposing, or whether he is obeying the calls of nature . . . is aware of what he is about. In going, standing, sitting, sleeping, watching, talking, or keeping silence, he knows what he is doing.

So does he, as to the body, continue to consider the body, either internally or externally, or both internally and externally. He keeps on considering how the body is something that comes to be, or again he keeps on considering how the body is something that passes away; or again he keeps on considering the coming to be with the passing away; or again, conscious that *there is the body*, mindfulness hereof becomes thereby established, far enough for the purposes of knowledge and self-collectedness. And he abides independent, grasping after nothing in the world whatever. Thus, bhikkhus, does a brother continue to consider the body.

And now does a brother consider the feelings?

Herein, O bhikkhus, is a brother when affected by a feeling of pleasure, aware of it, reflecting: *I feel a pleasurable feeling*. So, too, is he aware when affected by a painful feeling, or by a neutral feeling, or by a pleasant or painful or neutral feeling concerning material things, or by a pleasant or painful or neutral feeling concerning spiritual things.

And how does a brother consider thought?

Herein, O bhikkhus, a brother, if his thought be lustful, is aware that it is so, or if his thought be free from lust, is aware that it is so; or if his thought be full of hate, or free from hate, or dull, or intelligent, or attentive, or distract, or exalted, or not exalted, or mediocre, or ideal, or composed, or discomposed, or liberated, or bound, he is aware in each case that his thought is so, reflecting: *My thought is lustful*, and so on.

And how does a brother consider ideas?

Herein, O bhikkhus, a brother reflects. Such is material form; such is its genesis; such its passing away . . .

The Buddha taught that in order to achieve wisdom and goodness a man must be mindful of himself, or collected in himself, at all times. The word *Sati* which he used actually means memory or remembrance; so that the Buddha's teaching originally meant that a man must remember at all times. Today we use the phrase *be forgot himself* when a man does something wrong or unreasonable; but the Buddha's teaching meant far more than merely the opposite of this. A man was instructed to be mindful of his body in whatever it was doing at every

(please turn the page)



LATE SUNG DYNASTY — METROPOLITAN MUSEUM OF ART

Buddhist . . . continued

At one point in his discourse, Buddha was asked whether all or only some of his disciples reach the ultimate goal of Nirvana.

Some do and some do not, he replied.

Why is it, though Nirvana and the road to it exists, and you show the way, only some and not all of your disciples succeed in winning this ultimate goal.

That leads me to ask you, brahmin, a counter-question, which please answer as you deem fit. Do you think you know the road to Rajagaha?

Yes, I do.

What think you, brahmin? Suppose there came to you a man who wanted to go to Rajagaha and asked you to tell him the way; and suppose you told where his road lay and that, if he went a little way along it, he would first see a certain village, then a certain township a little further on, and still a little further on he would see Rajagaha with all its lovely pleasure-gardens and lovely woods and lovely spaces and lovely lakes; and suppose further that, with this guidance and instruction from you, that man took a cross-road and went west. Suppose now a second man came to you who wanted to go to Rajagaha and was by you told the route exactly as you had told the first man; and suppose that, with this guidance and instruction from you, he got safely to Rajagaha. What, brahmin, is the cause and condition why, while Rajagaha exists and the road to it exists and you tell them the way, one man takes a cross-road and goes west, while another gets safely to Rajagaha?

Where is my responsibility, Gotama? . . . I only indicate the way.

Just in the same way, brahmin, while Nirvana exists and the road to it exists and I tell them the way, some of my disciples do, and others do not, succeed, with this guidance and instruction, in winning the ultimate goal of Nirvana. Where is my responsibility, brahmin. The Truth-finder only indicates the way.

Canto on Wakefulness

Wakefulness is the way to immortality; heedlessness is the way to death. Those who are wakeful die not; the heedless are already dead.

The wise, those who have realized this outstanding feature of wakefulness, rejoice therein and are drawn to such spheres of activity as engage the Noble Ones.

Such wise ones, ever meditative, ever putting forth strong effort, attain to Nirvana, the incomparable state of security.

Continually increasing is the glory of him who is wakeful, who has aroused himself and is vigilant, who performs blameless deeds, and acts with becoming consideration.

Let such an one, rousing himself to wakefulness by the restraint and subjugation of himself, make for himself an island which no flood can engulf.

Ignorant and witless persons pursue a heedless course; the wise one scrupulously guards his wakefulness as his greatest treasure.

Pass not thy time in heedlessness; neither foster a desire for the pleasure of sense. The wakeful man, meditating, acquires an amplitude of bliss.

As a wise man who stands on a rocky eminence surveys those who are below and suffering, so does the wise man, who by his wakefulness has put to flight his folly, look down upon suffering mankind from the heights of wisdom he has mastered.

Wakeful midst the heedless, keenly vigilant midst the sleeping ones, the wise man forges ahead, even as a charger out-distances a horse of lesser strength.

By wakefulness did Indra attain to the sovereignty of the gods. Wakefulness is ever praised; folly is ever blamed.

A bikkhu who takes pleasure in wakefulness and looks with fear on heedlessness, advances like fire, consuming his fetters, large or small.

A bikkhu who takes pleasure in wakefulness and looks with fear on heedlessness, cannot fall backwards; he nears the Nirvana.

Zen Teachings

In Japan, the disciples of Buddha developed Zen, a form of Buddhism especially suited to the vigorous Island people. A favorite method of teaching by the Zen Masters was through the medium of homely stories, many of which strove to drive home one particular point.

Two men, on a pilgrimage, come to a stream. They see a good-looking young girl who, because of her attire, is unable to ford the stream. "Please, sirs, will you carry me across?" she asks. The elder of the two lifts her in his arms, wades to the other bank, and sets her down. The two men trudge on their way. Six hours later the younger pilgrim, breaking the silence, turns to his companion and says, "Brother, I do not think it was proper for you to carry that

moment; to be mindful of his thoughts . . . whatever might come into his head, to be aware of it at all times; to be mindful of his feelings . . . whatever emotion touched him; to be aware of it; to be mindful of his attitude . . . to weigh everything by the fundamental truths enunciated by the Buddha, the truths of what was good and what was evil. Putting it another way: the Buddha demanded that a man must awake . . . he must rouse himself to wakefulness by efforts based on knowledge; and the only way to this was through the constant awareness of himself.

Buddha taught in the sixth century B.C. A thousand years later, much of his teaching

young woman across that stream." "Brother," is the reply, "I carried her only for several minutes while crossing the water. You have been carrying her for the past six hours."

A famous forester of Japan had a young and favorite student who, one day, was to attempt to climb the highest, most difficult tree in the land. As the student made his ascent up the tree, the master stood silent. Even as he approached the topmost branches where each inch of the way he was faced with danger and possible death, the master stood with arms folded and made no sound.

Then the boy started to make his descent . . . feeling his way downward inch by inch. As he reached the stout trunk, the final stage of the descent, the master suddenly appeared to come to life and began to shout, "Be careful! Stay awake! Be careful!"

When the climber arrived at the base, he ran to the master and said, "How is it that you did not say a word when I was in real danger, but as soon as I reached the safe and easy part of the tree you began to call instructions to me?"

"My son," replied the master, "When you were in danger and knew it, you were watching out for yourself. You were proceeding with care at each step, and needed no admonitions. But when you reached the comparatively safe bottom portion of the tree, that was when you were in real danger. At this point self-confidence might have overtaken you and perhaps caused you to fall."

Confucius

Living in a period of oppression and civil strife, the Chinese sage strove to perfect himself and, at the same time, to teach others the way to perfection. A few examples of his timeless wisdom follow:

He once asked a follower: "Do you look upon me as a man who has studied and retained a mass of various knowledge?" "I do," was the reply. Said Confucius: "You are wrong. All my knowledge is strung on one connecting thread."

Confucius was no seeker after learning for learning's sake. His connecting thread . . . the object of all learning . . . was for him the striving to know and to perfect himself. Over and over again Confucius links together the word *learning* with self-cultivation.

Tzu Hsia, when governor of Chu-fu, asked for advice on government.



THE LEGENDARY MEETING OF CONFUCIUS, LEFT, WITH LAO-TZE



THIS PORTRAIT OF CONFUCIUS WAS DONE BY A MANCHU PRINCE 1735 A.D.

The Master said: Do not try to do things in a hurry. Do not be intent on small gains. What is done quickly is not done thoroughly; and if small gains are considered, great things remain unaccomplished.

Fan Chih asked a question about moral virtue. The Master said: In private life, show self-respect; in the management of affairs, be attentive and thorough; in your dealings with others, be honest and conscientious. Never abandon these principles, even among savages.

The Master said: The nobler sort of man is accommodating but not obsequious; the inferior sort is obsequious but not accommodating.

There are three errors to be avoided in the presence of a great man. The first is precipitancy . . . speaking before it is your turn to speak; the second is bashfulness . . . not speaking when your turn comes; and the third is heedlessness . . . speaking without observing the countenance of the listener.

There are three impulses against which the nobler sort of man is on his guard. In the period of youth, when the heyday in the blood has not yet subsided, he guards against lustfulness; in the prime of life, when the physical frame is vigorous and strong, he guards against pugnacity; in old age, when the vital forces are in their decline, he guards against the greed of gain.

You may speak of higher subjects to those who rise above the average level of mankind, but not to those who fall below it.

(please turn the page)

had become formalized and scholastic. It was at this time that Bodhidharma, the founder of Zen Buddhism, appeared on the scene. He swept aside all formal teaching. While continuing the pure strain of Buddhism in its deepest sense, the Zen teachers permitted of no philosophy. Their goal was man's own direct realization of truth. Because of this approach, little doctrine as such remains from the Zen teaching. The tradition is shown best in a series of stories, most of which consist of accounts of the Zen masters' practical, direct teaching of their pupils. And perhaps because of this, there is no tradition which has kept more undistorted that humanness and humor so fundamental to the true tradition.



A legend about Moses from the

Talmud

This tale taken from the Jewish Talmud is a remarkable illustration of the basic idea of the evolution of man

THE PORTRAIT OF MOSES. The whole world was shaken and enthralled by the miracle of the Exodus. The name of Moses was on everyone's lips. Tidings of the great miracle reached also the wise king of Arabistan. The king summoned his best painter and bade him go to Moses to paint his portrait and bring it back to him. When the painter returned, the king gathered together all his sages, wise in the science of physiognomics, and asked them to define by the portrait the character of Moses, his qualities, inclinations, habits, and the source of his miraculous power.

"King," answered the sages, "this is the portrait of a man, cruel, haughty, greedy of gain, possessed by desire for power and by all the vices which exist in the world."

A dispute began between the painter and the sages. The painter affirmed that the portrait of Moses had been painted by him quite accurately, while the sages maintained that Moses' character had been unerringly determined by them according to the portrait.

The wise king himself decided to verify who was right.

On entering the tent of the man of God, he bowed, knelt down, and told Moses of the dispute between the artist and the sages.

"At first, until I saw thy face," said the king, "I thought it must be that the artist painted thy image badly, for my sages are men very much experienced in the science of physiognomics. Now I am convinced that they are quite worthless men and that their wisdom is vain and worthless."

"No," answered Moses, "it is not so; both the painter and the physiognomists are men highly skilled and both are right. Be it known to thee that all the vices of which the sages spoke have indeed been assigned to me by nature, and perhaps to an even higher degree than was found by them from my portrait. But I struggled with my vices by long and intense efforts of the will, and gradually overcame and suppressed them in myself until all opposed to them became my second nature. And in this lies my greatest pride."

What was the essence of the teachings of Moses? It was the same as that of all other great teachers of mankind. In words that are very close to Christ's teaching that the Kingdom of Heaven lies within man, Moses says very clearly that it is within himself that a man must seek for life and good.

If thou shalt hearken unto the voice of the Lord thy God, to keep His commandments and His statutes which are written in this book of the law, and if thou turn unto the Lord thy God with all thine heart, and with all thy soul.

For this commandment which I command thee this day, it is not hidden from thee, neither is it far off.

It is not in heaven, that thou shouldest say, Who shall go up for us to heaven, and bring it unto us, that we may hear it, and do it?

Neither is it beyond the sea, that thou shouldest say, Who shall go over the sea for us, and bring it unto us, that we may hear it, and do it?

But the word is very nigh unto thee, in thy mouth, and in thy heart, that thou mayest do it.

See, I have set before thee this day life and good, and death and evil.

In that I command thee this day to love the LORD thy God; to walk in His ways and to keep His commandments and His statutes and His judgments, that thou mayest live and multiply; and the LORD thy God shall bless thee in the land whither thou goest to possess it.

FIFTH BOOK OF MOSES

The Early Church

Except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit.
JOHN, CHAPTER XII

The idea of inner change as a necessary prerequisite for the understanding of what is Truth forms a basic teaching of the early Christian Church. In the Gospels, where man is described as a seed capable of a definite inner growth, the idea of inner evolution is surely the central underlying theme. The difficulties in the way of self-perfected, the many obstacles that prevent a man from receiving teachings and acting upon them, are set forth in the parable of the sower.

And he spake many things unto them in parables, saying, Behold, a sower went forth to sow.

And when he sowed, some seeds fell by the wayside, and the fowls came and devoured them up.

Some fell upon stony places, where they had not much earth;

The teaching of Moses is well known in our western world. But the story quoted above shows an aspect which is often overlooked. Here Moses clearly demonstrates the fundamental truth that man, however great or wise he be, is not born as such but reaches his height through a process of self-perfecting. Moses said freely that he was born cruel, haughty, greedy, ambitious, and with many other vices. His triumph was that by long and intense efforts of the will he gradually overcame and suppressed those vices within himself, until all opposed to them became his second nature. This is the same as the teachings we have seen of Zoroaster, of the Gita, of the Buddha, of the Zen

and forthwith they sprung up, because they had no deepness of earth.

And when the sun was up, they were scorched; and because they had no root they withered away.

And some fell among thorns; and the thorns sprung up, and choked them.

But others fell into good ground, and brought forth fruit, some an hundred-fold, some sixty-fold, some thirty-fold.

Who hath ears to hear, let him hear.

MATTHEW CHAPTER XIII

In the collection of writings called Philokalia, of which no editions are published except in Greek and Russian, the methods and findings of early Christianity are set forth. Again we find training and restraint of one's self as the means for attainment of the highest in man. The obstacles in man's path are set forth in great detail.

Then St. Zosima took some worthless thing that was handy, I think it was a piece of straw or a splinter of wood, and added: "Who would quarrel or argue for this thing, or bear a grudge, or grieve, except perhaps a man who has truly lost his reason? Would not a man of God, working and striving forward in his life in God, value the whole world on a level with this straw, even if he were to possess everything? For, as I always say, *the barm is not in possessing but in possessing passionately.*"

Here St. Zosima recalled a brother who had vegetables and said: "Did he not sow? Did he not toil, and tend his plants, and manure the soil? But he did not pull up his vegetables and he did not throw them away; *be only had them as though he did not have them.* Therefore, when one of the elders came to him with the intention of testing him, and began to destroy his vegetables, he did not even show himself, but hid; and when only one cabbage root remained, said to the Elder: 'If you wish, Father, leave this and we will prepare a meal with it.' This showed the holy Father that he was a true slave of God, and not a slave of the vegetables, and he said to him: 'The Spirit of God is in you, brother.' For if he had possessed these vegetables passionately, he would have shown it immediately by sorrow and agitation. But he showed that he had, as though he had not."

Once the elders came to St. Anthony in order to examine which of the virtues is the most perfect. . . . Each of them said what he deemed right. Some of them praised fasting and vigilance because they put thoughts in order, made the mind more subtle and facilitated the approach of man to God; others approved of scorn of earthly things, because through this the mind becomes more calm, pure and free from worldly cares and therefore its approach to God becomes more easy; yet others wished to give the first place among all virtues to mercy. But St. Anthony said: "All virtues you mention are salutary and extremely necessary. . . . But we have seen that many have exhausted their bodies with excessive fasting, vigilance and retirement into the desert; many also have toiled with zeal, loved poverty and scorned worldly comforts so much that, keeping for themselves only as much as is necessary for one day, they distributed among the poor all that they had; and yet it happened that after all this they yielded to evil,



ST. JEROME READING AT THE FOOT OF A TREE — REMBRANDT

fell, and became deprived of the results of all their virtues. . . . The reason for this is nothing else but a lack of the virtue of JUDGMENT AND GOOD SENSE whose help they were unable to enjoy. For it is this virtue which teaches a man to go by the straight road, without turning off at crossroads. If we follow the royal road we shall never be drawn away by suggestions either from the right, towards excessive abstinence, or from the left, towards slackness, carelessness and laziness.

Judgment is the light of the soul, as the eye is the light of the body; so that if the eye is full of light, then the body of our deeds will also be full of light; but if that eye is dark, the whole of the body will be in darkness. By judgment a man examines his desires, words and deeds, and draws away from all those that take him away from God. By judgment he upsets and destroys all snares . . . distinguishing rightly what is good and what is bad."

The startling idea that some men find it impossible not to live in harmony with one another is expressed in the following anecdote from The Desert Fathers . . .

There were two old men living together in one cell, and never had there been even the paltriest contention between them. So the one said to the other, "Let us have one quarrel the way other men do."

But the other said, "I do not know how one makes a quarrel." The first said, "Look, I set a tile between us and say, *That is mine, and do thou say It is not thine, it is mine.* And thence arises contention and squabble."

So they set the tile between them, and the first one said, "That is mine," and the second made reply, "I hope that it is mine." And the first said, "It is not thine, it is mine." To which the second made answer, "If it is thine, take it."

After which they could find no way of quarreling.

(please turn the page)

masters . . . indeed, the same as those taught by all Masters of all time.

In early Christian literature, in a passage quoted from St. Zosima, we find the teaching that possessing things is no sin in itself, but the possession of them passionately is. If one possesses passionately, then the loss of what one possesses produces sorrow and agitation. The aim in this case is to have as though one had not. How clear a link, across continents and centuries to the teaching of the Gita, where action and possession are not seen as evil, but only acting or possessing with attachment.

Mohammed

Mohammed was the latest of the great teachers, and the greatest of the Mohammedan Sufi writers was Jalalud-din-Rumi from whom the passage quoted here is taken. Again, man is seen not as a completed being, but as an unrealized mass in which reside both good and evil, and whose aim is the ascent to God through perfecting of himself.

JALALUD-DIN RUMI: This is the Book of the Mathnawi which is the roots of the roots of the roots of the Mohammedan religion.

The being of Man is a Jungle: be on your guard against this being if you wish the Divine Breath.

In our being there are thousands of wolves and hogs: there is goodly and ungodly, fair and foul.

To the disposition that is preponderant in you belongs the decision as to what you are; when the gold is more than the copper, the mixture is gold.

The manner of acting that preponderates in your nature . . . in that same form you must needs rise from the dead.

Wisdom, knowledge and excellence can pass from Man into the ox and the ass.

The stumbling, restive horse becomes smooth-paced

and docile; the bear dances, the goat also salaams.

Volition passes from human beings into the dog, so that he becomes a shepherd, or a hunter, or a guardian.

Into Man may pass from the Teachers a moral disposition, so that he can become a seeker of God.

From that marvelous Jungle there is a hidden way to the beasts which have ensnared the spiritual prey.

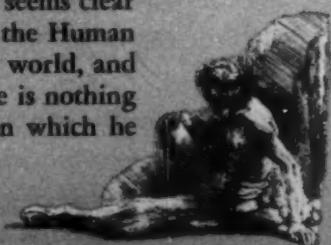
Oh you who are less than a dog, steal the spiritual pearl from within . . . from within the breasts of them that know God.

As you must steal, at any rate let it be that lovely pearl; as you are going to bear a burden, at any rate let it be a noble one.

In all the Teachings touched on in these pages, the basic truths are the same . . . there is no contradiction. Never is man looked upon as a completed Being . . . always he is shown as having the possibility of becoming something higher than he is; always it is indicated that a man can touch unused powers of understanding, not only of himself but also of the universe. Pride, greed, jealousy, anger, self-satisfaction, are always condemned.

Restraint, self-collectedness, freedom from attachment, wakefulness, are always praised. Each teaching points man's aims and the purpose of his existence toward the perfecting of himself in order to become capable of perceiving the Highest Truth.

In a world that seems unable to live in harmony with itself . . . a world that seems headed for more and more terrible periods of reciprocal destruction . . . it seems clear that only those basic teachings and principles expressed by the wisest and best of the Human Race hold the promise of hope. The average man today cannot set things right in the world, and can do little to govern the relations between nations. But no one can say that there is nothing he can do about the governance of himself or the choice of the direction in which he aims to go . END





The Textile Engineering Building of the Georgia Institute of Technology, Atlanta, Georgia

TEXTILE EDUCATION IN AMERICA



Director Herman A. Dickert

The A. French Textile School of Georgia Tech has been training men in textile engineering for more than fifty years. With the greatly expanded textile industry of Georgia, which today is the leading industry of the State, the demand for more and more trained technicians has resulted in enlarged training facilities. The new building of the Textile School, completed in the past year, is one of the finest examples of textile education centers anywhere.



Professor Charles A. Jones

DURING THE PAST FIFTY YEARS the textile industry in Georgia has expanded until it now ranks as the state's largest single industry. In addition to this, about 1,600,000 cotton-farmers in the Southeast are directly dependent upon it for livelihood.

This rapidly growing industry naturally called for more and more trained technicians if it was to progress. Since 1899, Georgia Institute of Technology in Atlanta, through its A. French Textile School, has trained men in the field of textile engineering; but with the ever-increasing demand for more and more graduates, it soon became evident that in order to meet this need, larger facilities and new and modern equipment were needed.

In answer to this challenge Georgia Tech, with the cooperation of the Textile Education Foundation, the Board of Regents of the University System, and the General Assembly of Georgia, in October 1947 broke ground for a new million-dollar textile engineering building. When completed in the fall of 1949, it became the finest of its kind in the world.

The modern and functional building embodies the latest type of building materials. It is equipped with up-to-date textile equipment, which was a gift of the Textile Education Foundation of Georgia. In appreciation of this gift, as well as the efforts of the Foundation toward textile education, Georgia Tech dedicated the new structure in formal exercises held on October 14, 1949 to the late W. Harrison Hightower, first president of the Foundation and a distinguished alumnus of the school.

Housed in the new building are modern and up-to-date classrooms, as well as laboratories equipped with the latest type of testing apparatus. The building also includes a modern audi-

torium containing a movie projector and built-in screen. The room's 3,000 square feet of floor space is taken up by three hundred theatre-type seats. The atmosphere is completely controlled by a master air-conditioning unit which can be set to any desired temperature independent of the rest of the building. Cold lighting is used for illumination, the fixtures being built into the ceiling to blend with the room's modern architecture.

The library is the most modern and up-to-date on the campus and contains, besides its extensive collection of textile literature, periodicals from the leading textile cities in the world.

The curriculum of the A. French Textile School is designed to give every student the best possible instruction and training in the textile field. The students study all of the fibers . . . cotton, wool, rayon, silk, synthetics, jute, hemp, flax, kapok, asbestos. They learn to process them into yarn and cloth by weaving and knitting. In the laboratories they test, bleach, dye, and finish. They are trained to operate a mill, with special attention to equipment, costs, conversion of machinery to the manufacturing of a different product, mill organization and many other phases of management.

Thus Georgia Tech, through the A. French Textile School housed in this newest of modern buildings, is meeting the challenge for more and more technically trained personnel by turning out each year skillfully trained textile engineers, equipped with the knowledge to become the future mill owners, executives and leaders in an ever-growing industrial South.



THE STORY OF A COLONIAL VILLAGE — circa 1768. From Brooklyn Museum.

THE PATCHWORK QUILT.

THERE was a time when American housewives prided themselves on their neat and often elaborate patchwork quilts; and merry indeed were the "quilting-bees," when the women, young and old, married and single, used to gather at some neighbor's house to take a hand in the work. What a hum of voices, what cheery laughter, what plying of needles, made the afternoon pass swiftly, while the work progressed as if invisible hands assisted! How pleasant it was when evening came, and needles and thimbles and chalk and line and scissors were laid aside, and the cheerful hostess invited her friends into the clean, tidy kitchen to tea! Our thrifty ancestors

were not ashamed to eat in the kitchen, where mothers, wives, and daughters did their own work, unflagged by servants. What abundance crowned the board!—the steaming tea-pot, hot "riz" biscuit, smoking from the oven, cream toast, three or four varieties of home-made cake, and preserves of every description—"sweet-meats," as they were generally termed. Besides the men-folks of the household, the minister was usually the only representative of the masculine sex: the husbands, brothers, and lovers came later in the evening, when all kinds of merry, harmless games were in order.

There are few parts of the country where this custom still lingers, cheap manufactures having superseded the necessity of this branch of do-

mestic industry. Here and there may be found some old grandmother who still clings to the habits of her youthful days, and employs much of her time at the quilting-frame. The artist from whose skillful pencil the touching illustration on this page is engraved was fortunate enough in one of his New England rambles to discover a farm-house where the art has not yet become entirely a matter of tradition. The old lady, whose pleasant face he has faithfully transferred to his drawing, kindly gave him permission to sketch her while at work. She is a type of a race which is rapidly passing away under new conditions of society. The next generation will know them only by tradition, and by such pictures as the one we give on this page.

The AMERICAN PATCHWORK QUILT

The Colonial coverlet is to American fabrics what the poetry of Whittier is to our literature. Trace the rise and progress of art in the new world, and you will find in the colors and designs of grandmother's *kiver* stirrings of independent creative effort.

The setting up of the coverlet is beyond skill to describe or even to comprehend. The women gathered, picked, carded and spun the cotton. The sheep were sheared, the wool was picked, carded and spun. Then roots were dug, barks of many different trees were collected, and the *bluepot* was set to make the dyes according to ancestral methods.

Despite the pioneer's hardships, dangers, and lack of skill, beautiful designs worthy of note today were conceived. Because of its scarcity, scraps of paper were saved from old

letters and wrappings. On them the drafts or patterns were written. Curiously like notes of music, the rhythmic markings were passed from mother to daughter. The story is told of a woman who was weaving a coverlet but had no pattern inherited from her mother. She used the notes of Mendelssohn's Spring Song and wove a lovely coverlet.

Our American art, like our people, comes of mixed ancestry. The designs came from the Dutch in New Amsterdam, the Mennonites in Pennsylvania, the Puritans in New England. The *Lion and Eagle* was woven by a woman who loved her new land, but thought with nostalgia of her former home. *Flowers of Edinboro* was a Scotchwoman's sigh for her old country. Since all art is an expression of a people's soul, the coverlets had names and designs that were feminine and

(please turn)



THE QUILTING PARTY. Oil on wood, 1840-1850.
Collection Museum of Modern Art, N. Y. Gift of Mrs. John D. Rockefeller, Jr.



The women of a house would save up odd-shaped bits and pieces of cloth, and when an important occasion arose . . . such as a wedding or a christening . . . the neighbors would gather for an evening and each would be given a square or other shape of calico, gingham, or chintz to piece together. Talk and refreshments would be the order, and thus a tedious

task grew into a social pastime. Later the patches were gathered, sewn into the final pattern, stretched on a quilting frame, and finished. The quilting itself, which served to hold together the patterned top, the filling, and the bottom, ranged from the simplest to the most intricate stitching.

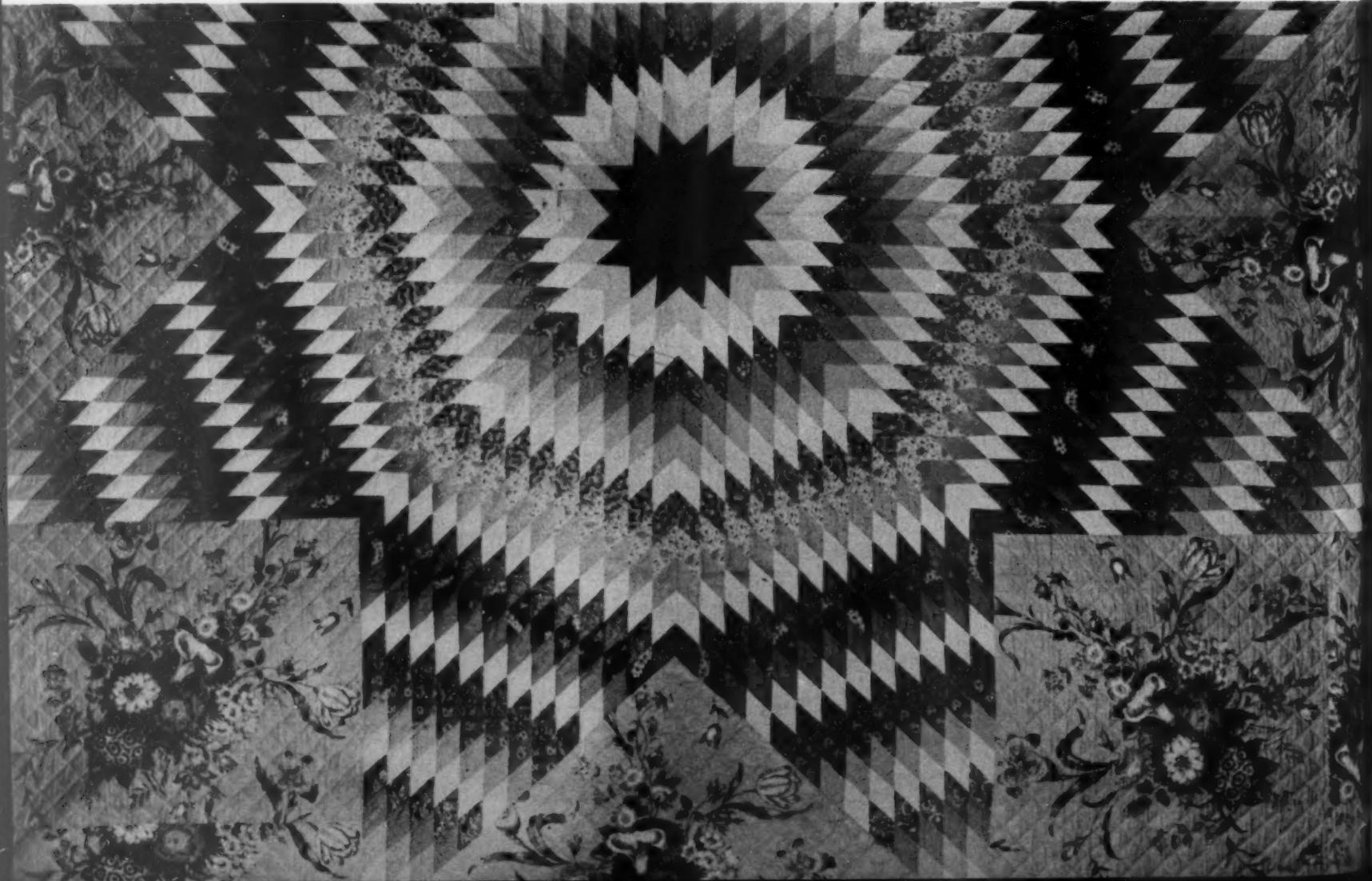


An adaptation of an old puffed counterpane. Called HEIRLOOM, this is one of Bates Fabrics' Anniversary series, reproduced from original 19th Century designs.



AN IMPORTANT social as well as economic factor in Early Americana . . . the Patchwork Bedspread . . . has inspired the development of an important trend in textiles for home interiors. Patching and quilting, along with knitting, have never relinquished the place they usurped in American women's hearts early in the 18th Century. Rather, indeed, have they grown more dear to homemakers in rural and urban areas throughout the land. Because of their widespread influence, the Editors of AMERICAN FABRICS bring you a brief history of the origin and history of patchwork quilts, together with reproductions of a number of designs of significance and inspiration.

Early American Quilt known as STAR OF BETHLEHEM or TEXAS STAR. From the Brooklyn Museum.





MAYTIME — Modern version of an original early American quilt at the Brooklyn Museum. By Barclay Home Products.

Quilts and Bedspreads . . . continued

dainty, stern and solemn, prim and exuberant. *Lonely Heart* told the story of a deserted wife. *Perplexity* described a fickle young maiden's state of mind.

From the days of Indian warfare to Lee's Surrender, the entire history of America may be traced by coverlets. During the time when England forbade the manufacturer of *not even a nail*, Dame Margaret wove a coverlet and defiantly called it "Agriculture and Manufacturing are the foundation of our independence." Whoever wove the word *liberty* thirty-six times must, indeed, have loved it as well as Patrick Henry. Patriots, too, designed *E. Pluribus Unum*, *Freedom's Home*, and *Stars and Stripes*. The immigrants of those early days found fulfillment of their heart's desire . . . freedom and justice. Just as the newcomer knelt on the shore of Massachusetts and offered thanks to God, the weaver likewise expressed his patriotism by weaving into his coverlet his country's or his party's emblem. It is no accident that later, in 1844, when the Democratic party was formed, the chanticleer was first woven into a coverlet.

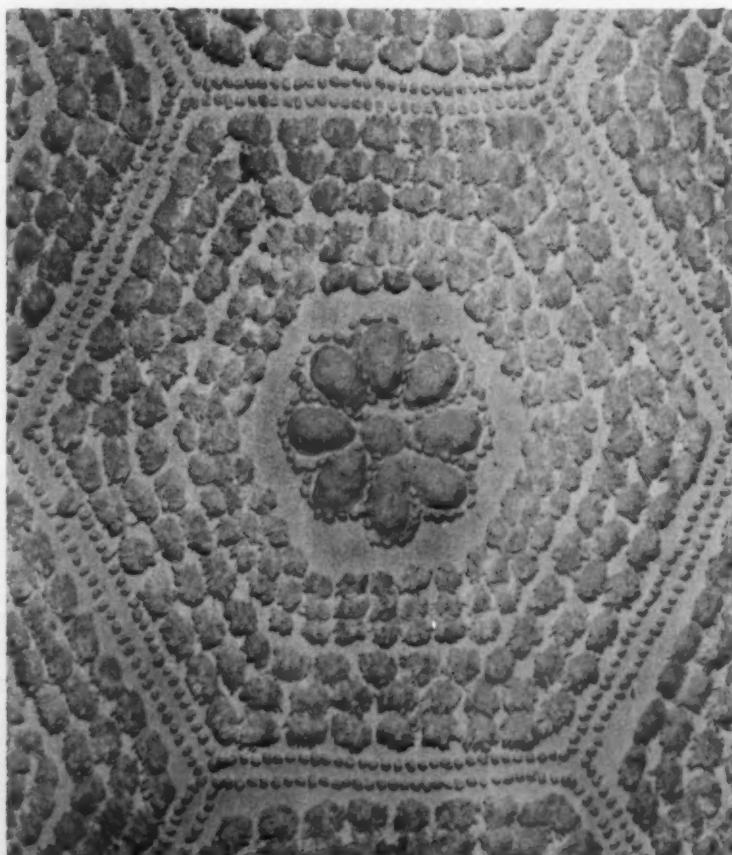
The Union soldiers who carried off the coverlet of a rebel mountain woman lived to regret it. Perhaps the soldiers thought that this was safe loot. They reckoned, however, without knowing that a mountain woman's *kiver* is her ancestral silver. Into the enemy's camp she rode and forced her way into the presence of the commanding officer, demanding her precious cover. Today, that red and blue *badge of courage* is still in existence, none the worse for wear and tear.

The design of the coverlet may have been inexpert and unskilled, but it developed into a truly national art. We may be well acquainted with the colors of the Gobelin tapestries, the designs of the Greeks, the individuality of the Egyptians, but the pioneer woman knew nothing of these things. Her knowledge was gleaned from her Bible or her copy of Pilgrim's Progress. Out of her need for beauty and self-expression, however, she created exquisite designs. From her indigo, her madder, her walnut shells, she *biled* her colors until they sparkled. And today, that lovely quilt or bedspread, or even the printed dress in that smart window on Fifth Avenue may owe its striking design to Grandma.

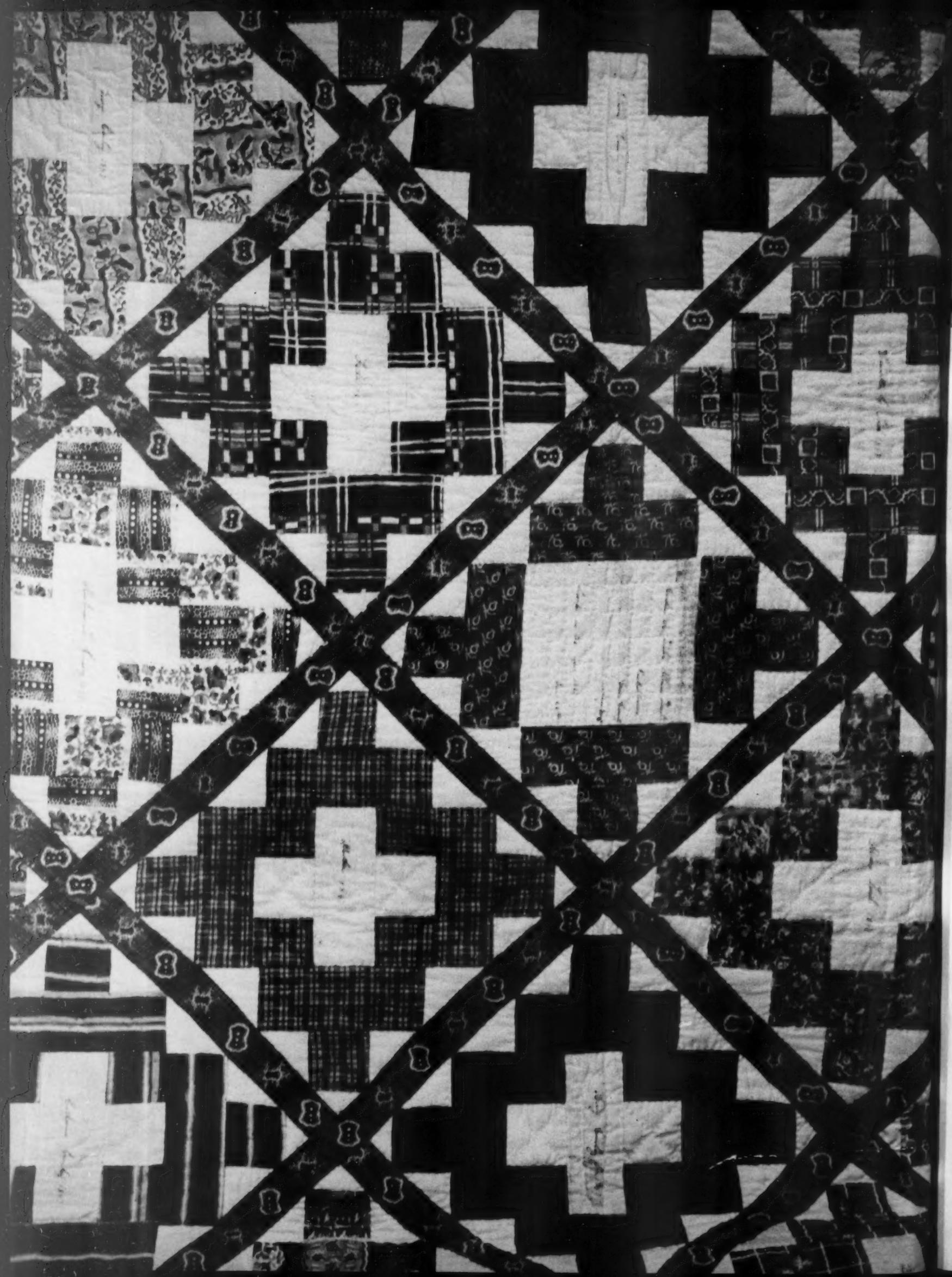
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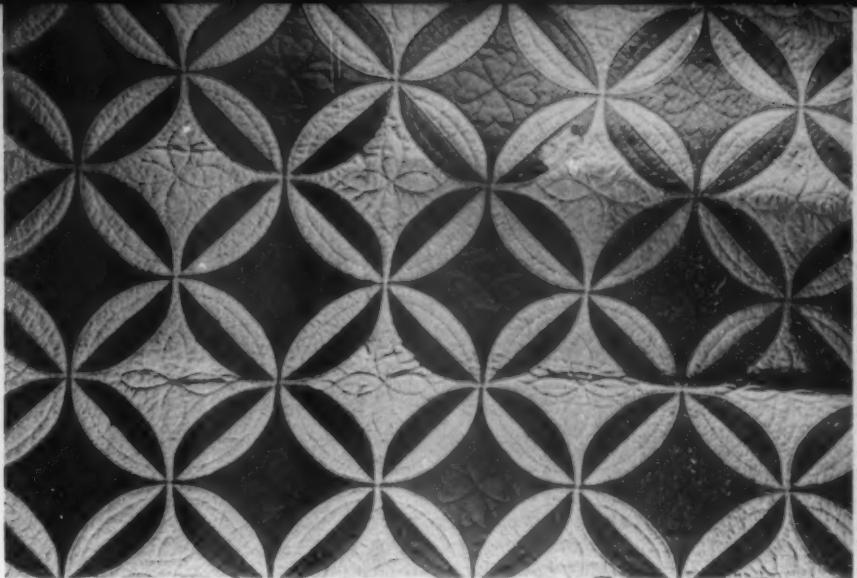
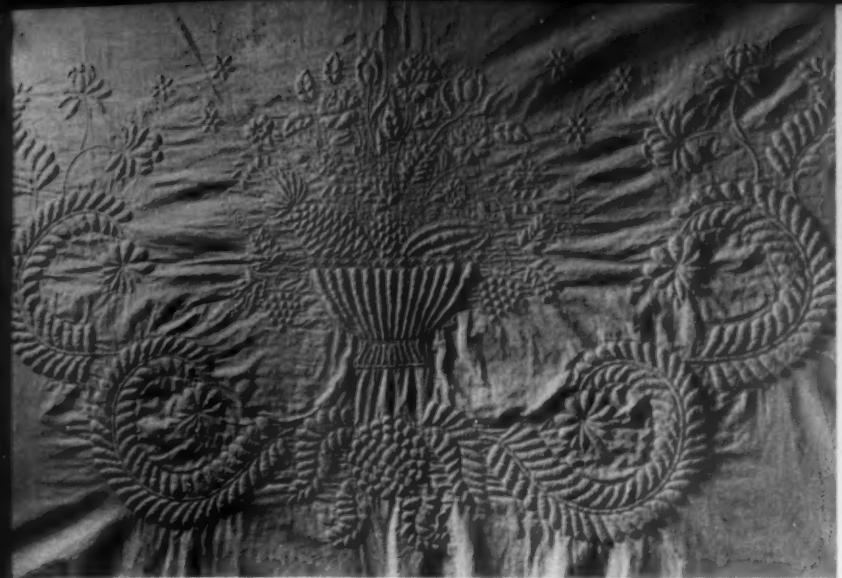


Taken from the collection of Cabin Crafts bedspreads, the above, called PENNSYLVANIA DUTCH, was executed in punch work with hand-tied fringe. Below, a reproduction called HEXAGON, from an old American candlewick spread. Mr. Fred R. Westcott, president of Cabin Crafts, has a fine collection of original quilts.



JUNE STAR — Stylized appliquéd motifs in a patchwork type quilt adapted by Barclay Home Products from an old colonial quilt.





Above are two superb examples of Basket Quilting on white. Courtesy Brooklyn Museum.

Quilts and Bedspreads . . .

All patchwork by implication tells some sort of story. It tells of the contemporary materials, of skill, of color and pattern sense, of ingenuity in times of want, of selection in times of plenty. Some, very much in the manner of the Egyptians, tell a picture story directly.

From the time the first cloth was woven, from the time the first cloth had become threadbare, there have been patches. There have been patches to reinforce, patches to cover, plain patches, and fancy patches.

The Egyptians made picture stories by sewing scraps of colored cloth onto a plain background.

Weaving reached its richest heights during the Renaissance. The guilds produced sumptuous silks, velvets and brocades, among others. Royal pennants, canopies, coverlets, sewn from the finest cloths, were embellished with appliquéd pieces of contrasting materials to highlight the various crests and emblems.

Betsy Ross, it is told, made the first Star-Spangled Banner by piecing strips of red and white bunting. She appliquéd the stars onto the navy ground. Most flags and pennants are patched in the same way.

In other days when fabrics were scarce and dear, the Dutch, French and English housewives, and others too numerous to mention, saved every precious scrap of material to sew together into coverlets.

When women came to the bare, rough, New World they brought with them, among other things, their thimbles, needles and *resourcefulness*. Since there was no textile industry, what clothing and bed linens were brought had to do for a very long time. These were guarded, mended, patched. Scraps of the patches were saved to be sewn together to make other clothes, other coverings.

END *

Not all bedspreads or quilts were as simple and carefully thought out as the two shown at the top of this page. The two ladies examining the *crazy-quilt* have no conception of just how crazy it is. No patch is left as is. Wherever there is a space more than two inches square, there has been painted or appliquéd a flower or a butterfly, and as if that were not plenty, the outline has been embroidered many times in varying stitches. The patches are chosen not with a thought to the whole, but rather as mementoes of events. Several of the patches are printed silk pennants commemorating the Baltimore Exposition of 1881.

Opposite: BRIDE'S AUTOGRAPH QUILT, with names of quilters — circa 1840. Brooklyn Museum.



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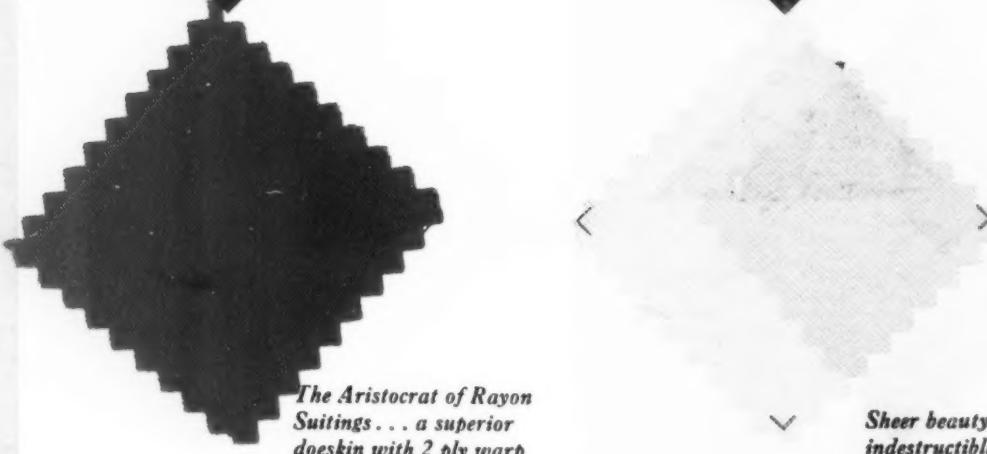
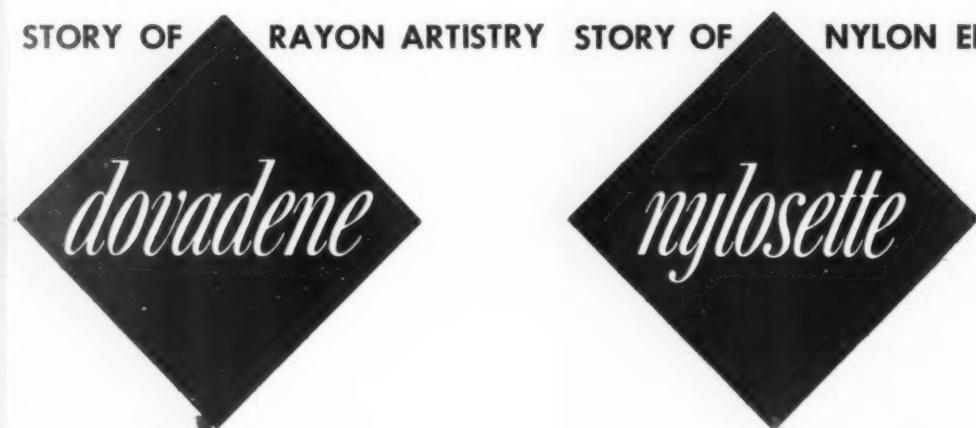
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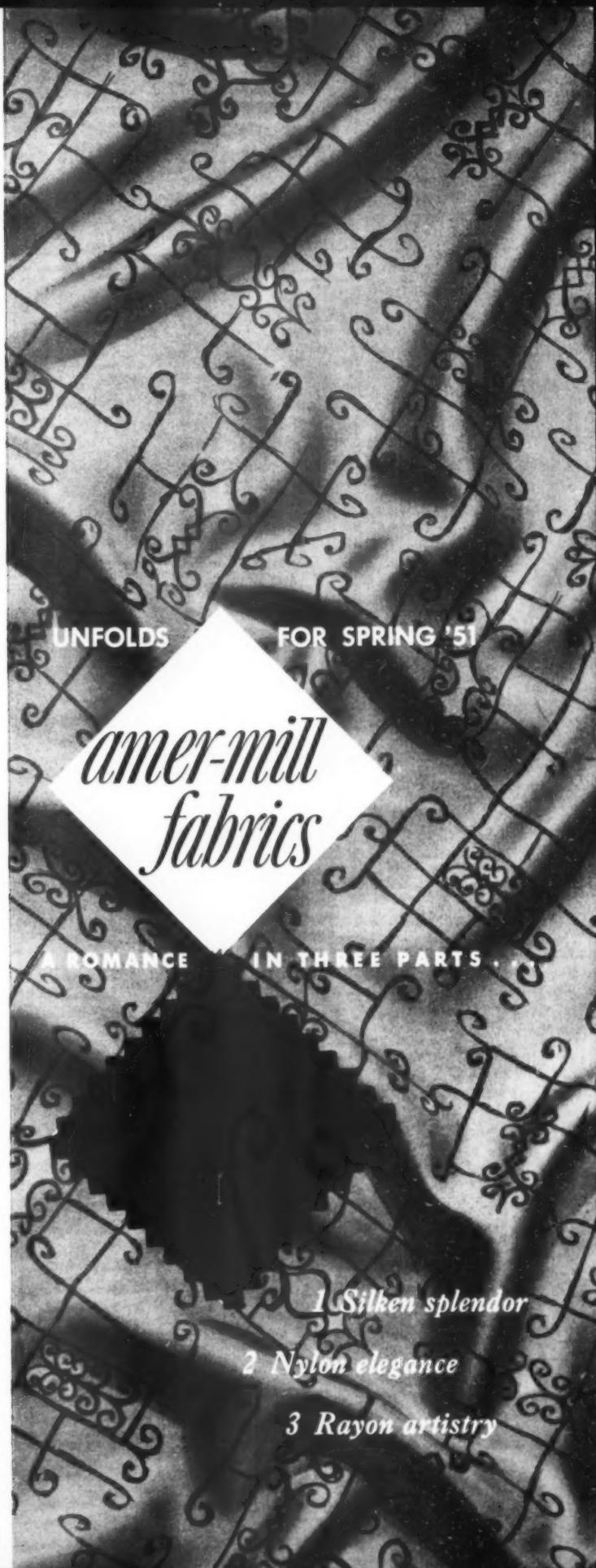
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